



# Appendix B

## E-UTRA Band 5



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# 1 Effective (Isotropic) Radiated Power Output Data

**Effective Radiated Power of Transmitter (ERP) for LTE BAND 5**

Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM1	1.4M	LCH	RB1#0	22.8	17.05	38.45	PASS
				RB1#2	22.98	17.23	38.45	PASS
				RB1#5	22.75	17	38.45	PASS
				RB3#0	22.87	17.12	38.45	PASS
				RB3#2	22.86	17.11	38.45	PASS
				RB3#3	23.01	17.26	38.45	PASS
				RB6#0	21.95	16.2	38.45	PASS
			MCH	RB1#0	22.73	16.98	38.45	PASS
				RB1#2	22.85	17.1	38.45	PASS
				RB1#5	22.81	17.06	38.45	PASS
				RB3#0	22.93	17.18	38.45	PASS
				RB3#2	22.8	17.05	38.45	PASS
				RB3#3	22.9	17.15	38.45	PASS
				RB6#0	21.77	16.02	38.45	PASS
			HCH	RB1#0	22.79	17.04	38.45	PASS
				RB1#2	22.88	17.13	38.45	PASS
				RB1#5	22.81	17.06	38.45	PASS
				RB3#0	22.89	17.14	38.45	PASS
				RB3#2	22.91	17.16	38.45	PASS
				RB3#3	22.82	17.07	38.45	PASS
				RB6#0	21.99	16.24	38.45	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM2	1.4M	LCH	RB1#0	21.99	16.24	38.45	PASS
				RB1#2	22.42	16.67	38.45	PASS
				RB1#5	21.96	16.21	38.45	PASS
				RB3#0	21.94	16.19	38.45	PASS
				RB3#2	21.84	16.09	38.45	PASS
				RB3#3	21.95	16.2	38.45	PASS
				RB6#0	21.12	15.37	38.45	PASS
			MCH	RB1#0	21.97	16.22	38.45	PASS
				RB1#2	22.19	16.44	38.45	PASS
				RB1#5	21.95	16.2	38.45	PASS
				RB3#0	22.01	16.26	38.45	PASS
				RB3#2	21.69	15.94	38.45	PASS
				RB3#3	21.97	16.22	38.45	PASS
				RB6#0	21.04	15.29	38.45	PASS
			HCH	RB1#0	22.17	16.42	38.45	PASS
				RB1#2	21.79	16.04	38.45	PASS
				RB1#5	21.9	16.15	38.45	PASS
				RB3#0	21.83	16.08	38.45	PASS
				RB3#2	21.88	16.13	38.45	PASS
				RB3#3	21.82	16.07	38.45	PASS
				RB6#0	20.86	15.11	38.45	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM1	3M	LCH	RB1#0	22.82	17.07	38.45	PASS
				RB1#7	23.05	17.3	38.45	PASS
				RB1#14	22.92	17.17	38.45	PASS
				RB8#0	21.88	16.13	38.45	PASS
				RB8#4	21.91	16.16	38.45	PASS
				RB8#7	21.93	16.18	38.45	PASS
				RB15#0	21.95	16.2	38.45	PASS
			MCH	RB1#0	22.83	17.08	38.45	PASS
				RB1#7	23.05	17.3	38.45	PASS
				RB1#14	22.81	17.06	38.45	PASS
				RB8#0	21.79	16.04	38.45	PASS
				RB8#4	22.06	16.31	38.45	PASS
				RB8#7	22	16.25	38.45	PASS
				RB15#0	21.89	16.14	38.45	PASS
			HCH	RB1#0	22.97	17.22	38.45	PASS
				RB1#7	23.15	17.4	38.45	PASS
				RB1#14	22.83	17.08	38.45	PASS
				RB8#0	21.89	16.14	38.45	PASS
				RB8#4	21.97	16.22	38.45	PASS
				RB8#7	21.84	16.09	38.45	PASS
				RB15#0	21.9	16.15	38.45	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM2	3M	LCH	RB1#0	22.32	16.57	38.45	PASS
				RB1#7	21.93	16.18	38.45	PASS
				RB1#14	22.26	16.51	38.45	PASS
				RB8#0	20.86	15.11	38.45	PASS
				RB8#4	20.99	15.24	38.45	PASS
				RB8#7	20.91	15.16	38.45	PASS
				RB15#0	21	15.25	38.45	PASS
			MCH	RB1#0	21.8	16.05	38.45	PASS
				RB1#7	22.52	16.77	38.45	PASS
				RB1#14	22.33	16.58	38.45	PASS
				RB8#0	20.9	15.15	38.45	PASS
				RB8#4	21.04	15.29	38.45	PASS
				RB8#7	20.89	15.14	38.45	PASS
				RB15#0	20.88	15.13	38.45	PASS
			HCH	RB1#0	21.98	16.23	38.45	PASS
				RB1#7	22.28	16.53	38.45	PASS
				RB1#14	21.73	15.98	38.45	PASS
				RB8#0	20.9	15.15	38.45	PASS
				RB8#4	20.95	15.2	38.45	PASS
				RB8#7	20.82	15.07	38.45	PASS
				RB15#0	20.9	15.15	38.45	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM1	5M	LCH	RB1#0	22.87	17.12	38.45	PASS
				RB1#13	22.82	17.07	38.45	PASS
				RB1#24	22.74	16.99	38.45	PASS
				RB12#0	21.81	16.06	38.45	PASS
				RB12#6	21.99	16.24	38.45	PASS
				RB12#13	21.87	16.12	38.45	PASS
				RB25#0	21.91	16.16	38.45	PASS
			MCH	RB1#0	22.69	16.94	38.45	PASS
				RB1#13	22.88	17.13	38.45	PASS
				RB1#24	22.8	17.05	38.45	PASS
				RB12#0	21.87	16.12	38.45	PASS
				RB12#6	21.89	16.14	38.45	PASS
				RB12#13	21.9	16.15	38.45	PASS
				RB25#0	21.98	16.23	38.45	PASS
			HCH	RB1#0	22.74	16.99	38.45	PASS
				RB1#13	22.9	17.15	38.45	PASS
				RB1#24	22.69	16.94	38.45	PASS
				RB12#0	21.87	16.12	38.45	PASS
				RB12#6	21.95	16.2	38.45	PASS
				RB12#13	21.78	16.03	38.45	PASS
				RB25#0	21.87	16.12	38.45	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM2	5M	LCH	RB1#0	22.02	16.27	38.45	PASS
				RB1#13	21.98	16.23	38.45	PASS
				RB1#24	22.26	16.51	38.45	PASS
				RB12#0	20.98	15.23	38.45	PASS
				RB12#6	21.02	15.27	38.45	PASS
				RB12#13	20.97	15.22	38.45	PASS
				RB25#0	20.9	15.15	38.45	PASS
			MCH	RB1#0	21.71	15.96	38.45	PASS
				RB1#13	22.34	16.59	38.45	PASS
				RB1#24	22.12	16.37	38.45	PASS
				RB12#0	20.88	15.13	38.45	PASS
				RB12#6	20.91	15.16	38.45	PASS
				RB12#13	20.92	15.17	38.45	PASS
				RB25#0	20.88	15.13	38.45	PASS
			HCH	RB1#0	21.77	16.02	38.45	PASS
				RB1#13	22.25	16.5	38.45	PASS
				RB1#24	21.72	15.97	38.45	PASS
				RB12#0	20.8	15.05	38.45	PASS
				RB12#6	20.89	15.14	38.45	PASS
				RB12#13	20.78	15.03	38.45	PASS
				RB25#0	20.86	15.11	38.45	PASS





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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM1	10M	LCH	RB1#0	22.95	17.2	38.45	PASS
				RB1#25	23.02	17.27	38.45	PASS
				RB1#49	22.87	17.12	38.45	PASS
				RB25#0	21.84	16.09	38.45	PASS
				RB25#13	21.98	16.23	38.45	PASS
				RB25#25	21.99	16.24	38.45	PASS
				RB50#0	22.06	16.31	38.45	PASS
			MCH	RB1#0	23.05	17.3	38.45	PASS
				RB1#25	22.85	17.1	38.45	PASS
				RB1#49	22.95	17.2	38.45	PASS
				RB25#0	21.97	16.22	38.45	PASS
				RB25#13	21.94	16.19	38.45	PASS
				RB25#25	22.04	16.29	38.45	PASS
				RB50#0	22	16.25	38.45	PASS
			HCH	RB1#0	22.82	17.07	38.45	PASS
				RB1#25	23.05	17.3	38.45	PASS
				RB1#49	22.9	17.15	38.45	PASS
				RB25#0	21.92	16.17	38.45	PASS
				RB25#13	21.94	16.19	38.45	PASS
				RB25#25	21.86	16.11	38.45	PASS
				RB50#0	21.92	16.17	38.45	PASS



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Test Band(LTE)	Test Mode	Test Bandwidth	Test channel	Test RB	Measured (dBm)	ERP (dBm)	limit (dBm)	Verdict
BAND5	LTE/TM2	10M	LCH	RB1#0	22.36	16.61	38.45	PASS
				RB1#25	22.08	16.33	38.45	PASS
				RB1#49	22.11	16.36	38.45	PASS
				RB25#0	20.94	15.19	38.45	PASS
				RB25#13	21.05	15.3	38.45	PASS
				RB25#25	20.98	15.23	38.45	PASS
				RB50#0	20.92	15.17	38.45	PASS
			MCH	RB1#0	22.35	16.6	38.45	PASS
				RB1#25	22.17	16.42	38.45	PASS
				RB1#49	22.02	16.27	38.45	PASS
				RB25#0	20.91	15.16	38.45	PASS
				RB25#13	20.94	15.19	38.45	PASS
				RB25#25	20.92	15.17	38.45	PASS
				RB50#0	20.87	15.12	38.45	PASS
			HCH	RB1#0	22.11	16.36	38.45	PASS
				RB1#25	22.11	16.36	38.45	PASS
				RB1#49	22.26	16.51	38.45	PASS
				RB25#0	20.81	15.06	38.45	PASS
				RB25#13	20.87	15.12	38.45	PASS
				RB25#25	20.82	15.07	38.45	PASS
				RB50#0	21.07	15.32	38.45	PASS

Note:

a: For getting the ERP (Efficient Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

b: SGP=Signal Generator Level



## 2 Peak-to-Average Ratio

### Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
Band 5	TM1/10M	LCH	4.46	13	PASS
		MCH	4.93	13	PASS
		HCH	4.43	13	PASS
	TM2/10M	LCH	5.48	13	PASS
		MCH	5.94	13	PASS
		HCH	5.57	13	PASS

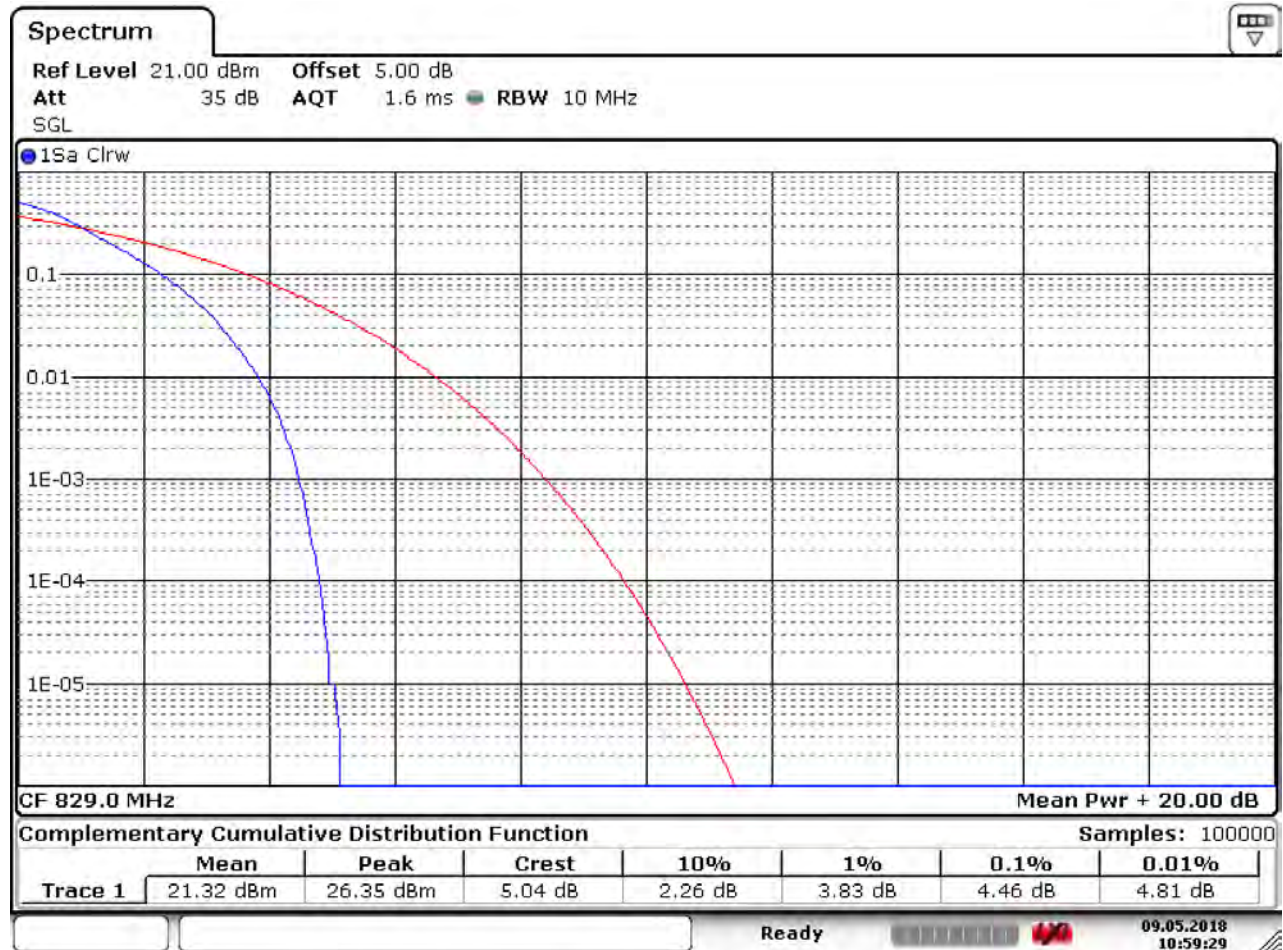
### Part II - Test Plots

## 2.1 For LTE

### 2.1.1 Test Band = LTE band5

#### 2.1.1.1 Test Mode = LTE/TM1.Bandwidth=10MHz

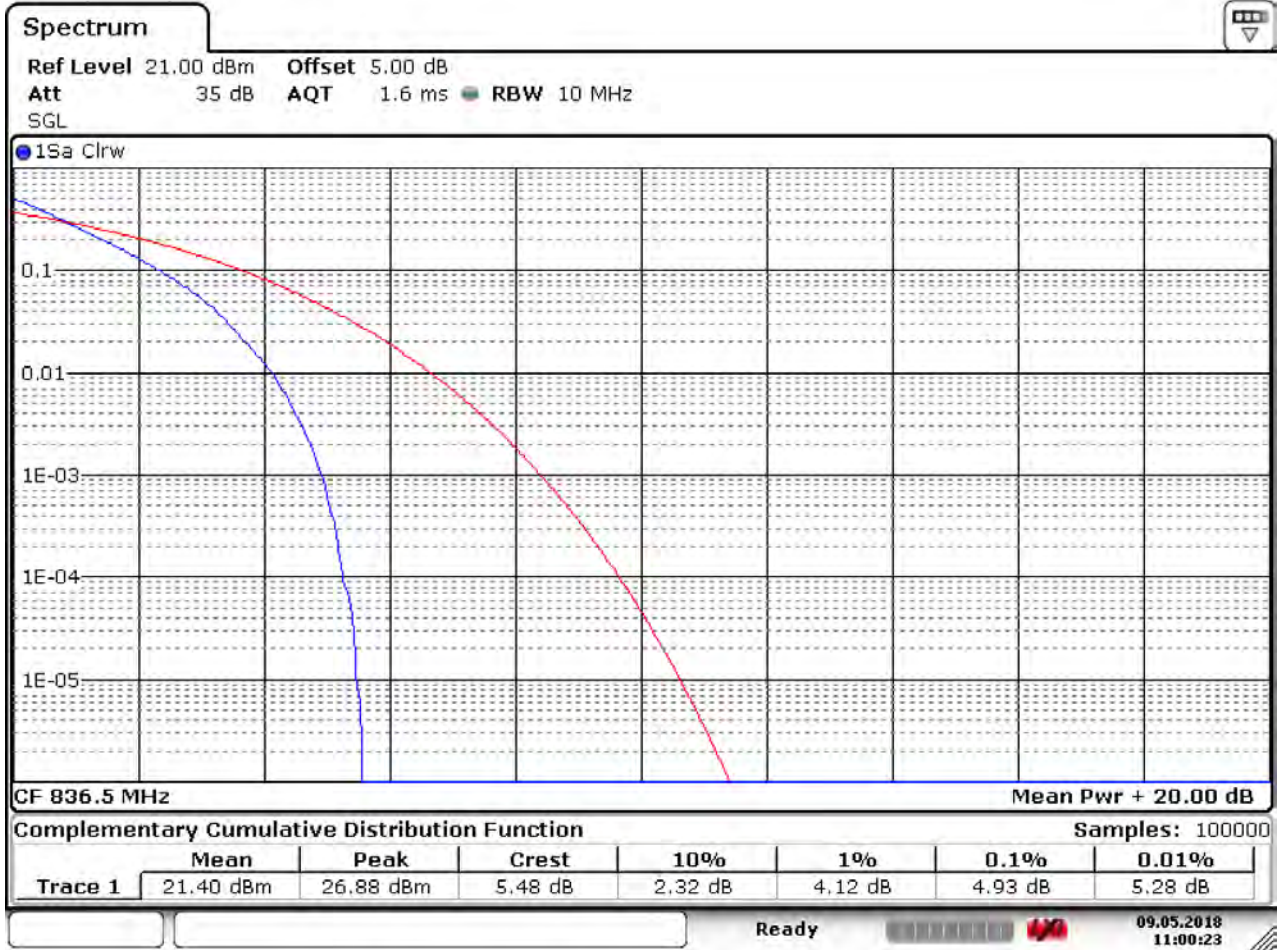
##### 2.1.1.1.1 Test Channel = LCH



Date: 9.MAY.2018 10:59:29



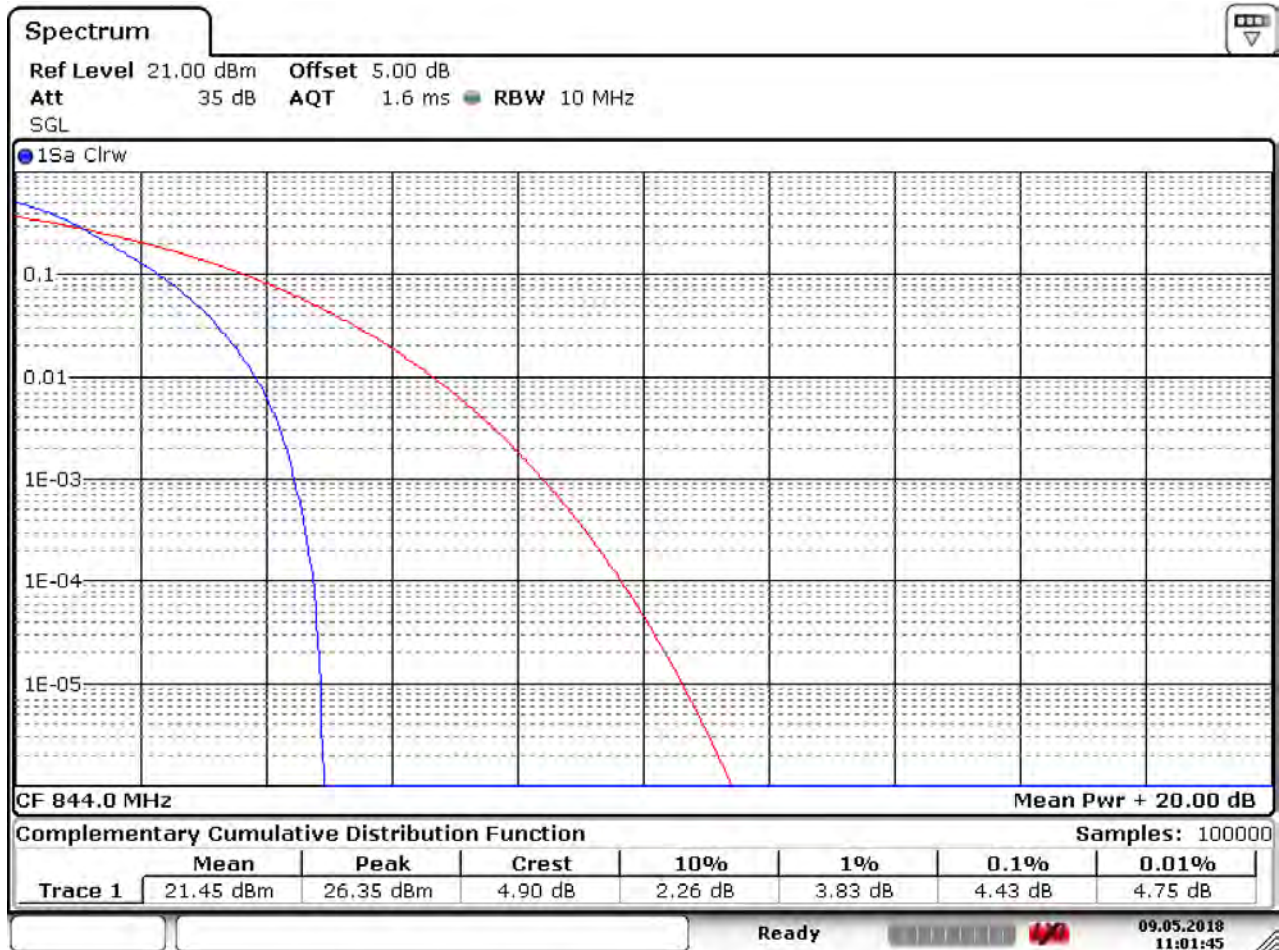
**2.1.1.1.2 Test Channel = MCH**



Date: 9.MAY.2018 11:00:23



2.1.1.1.3 Test Channel = HCH

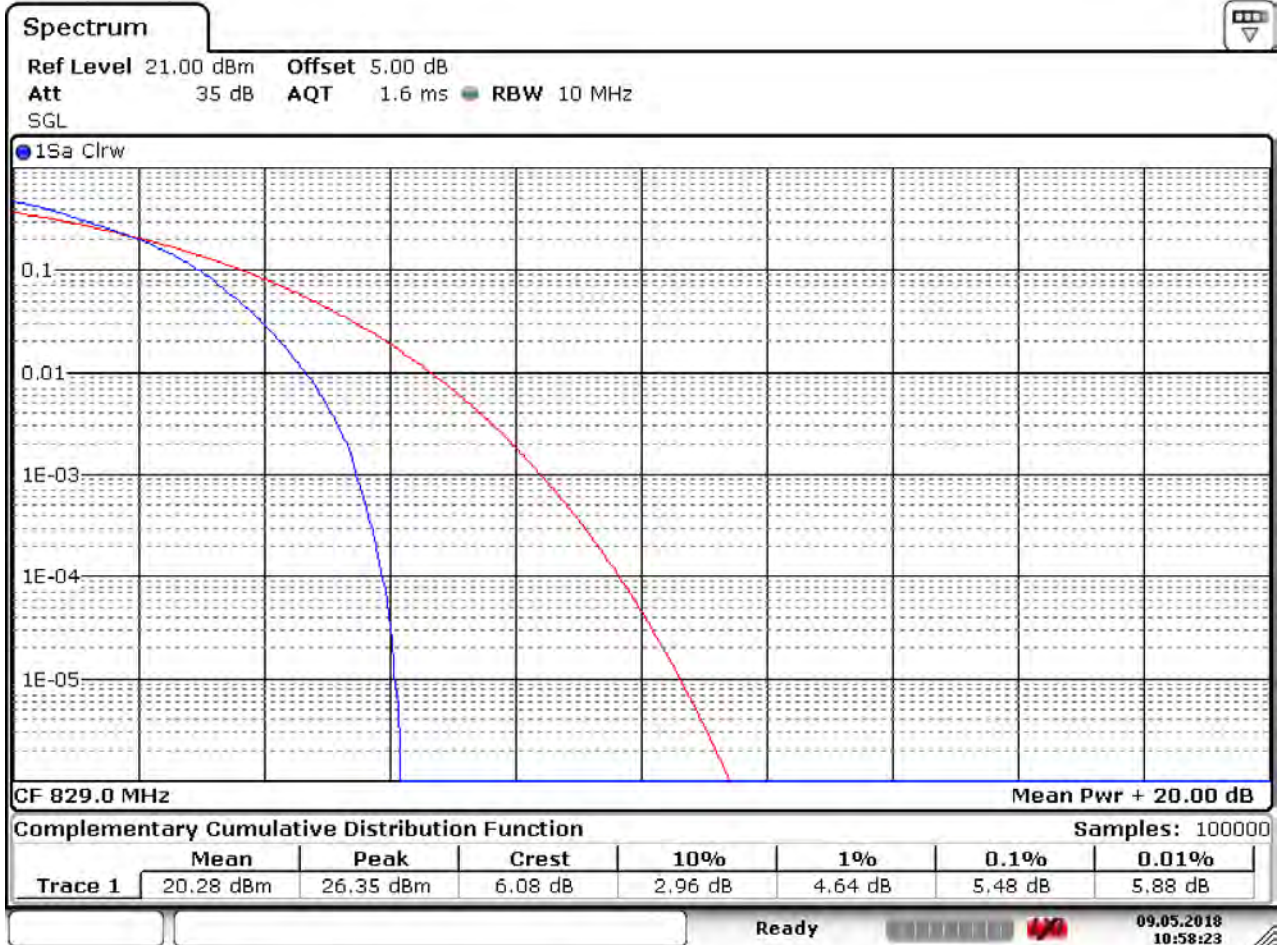


Date: 9.MAY.2018 11:01:46



2.1.1.2 Test Mode = LTE/TM2.Bandwidth=10MHz

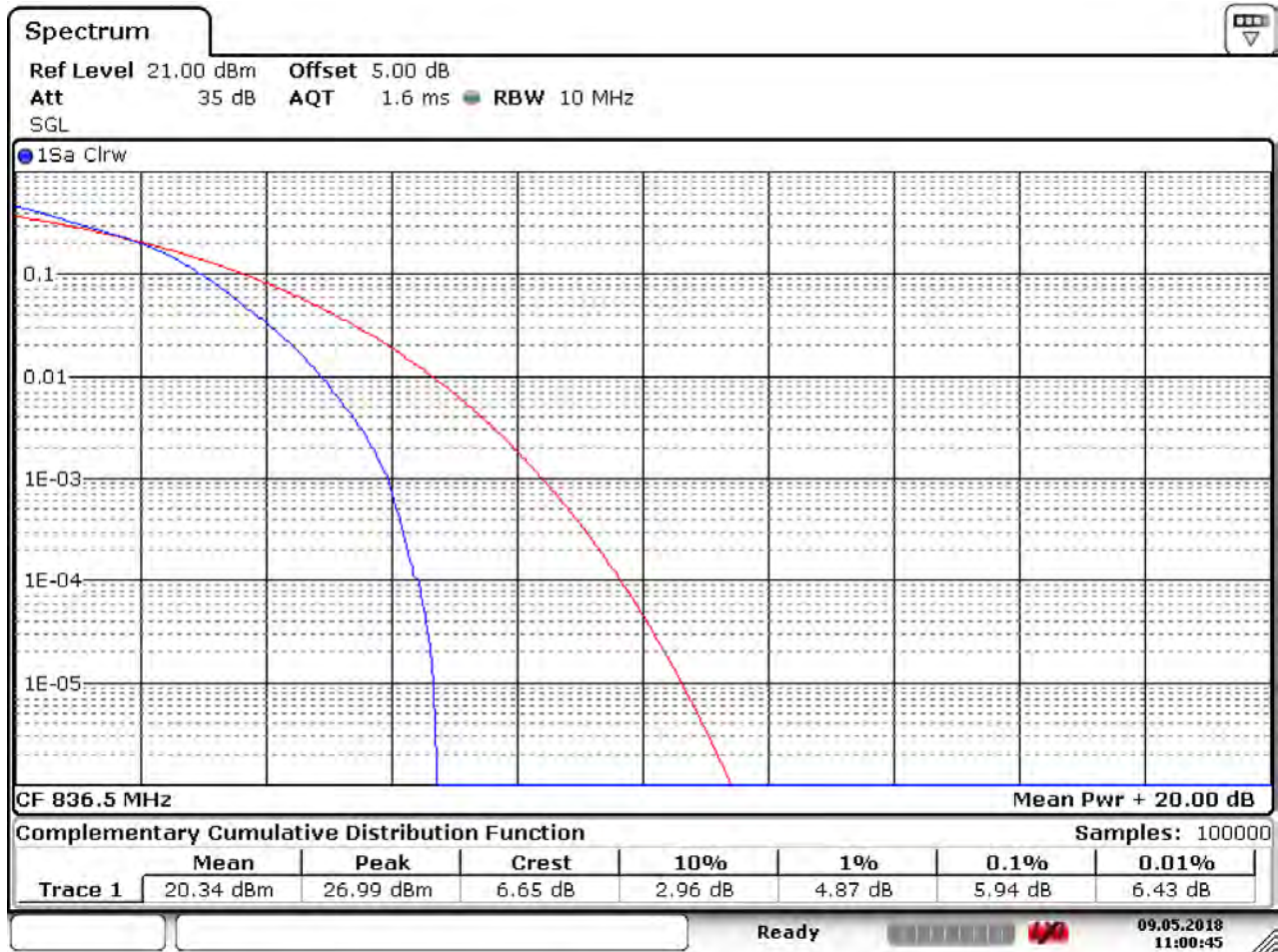
2.1.1.2.1 Test Channel = LCH



Date: 9.MAY.2018 10:58:24



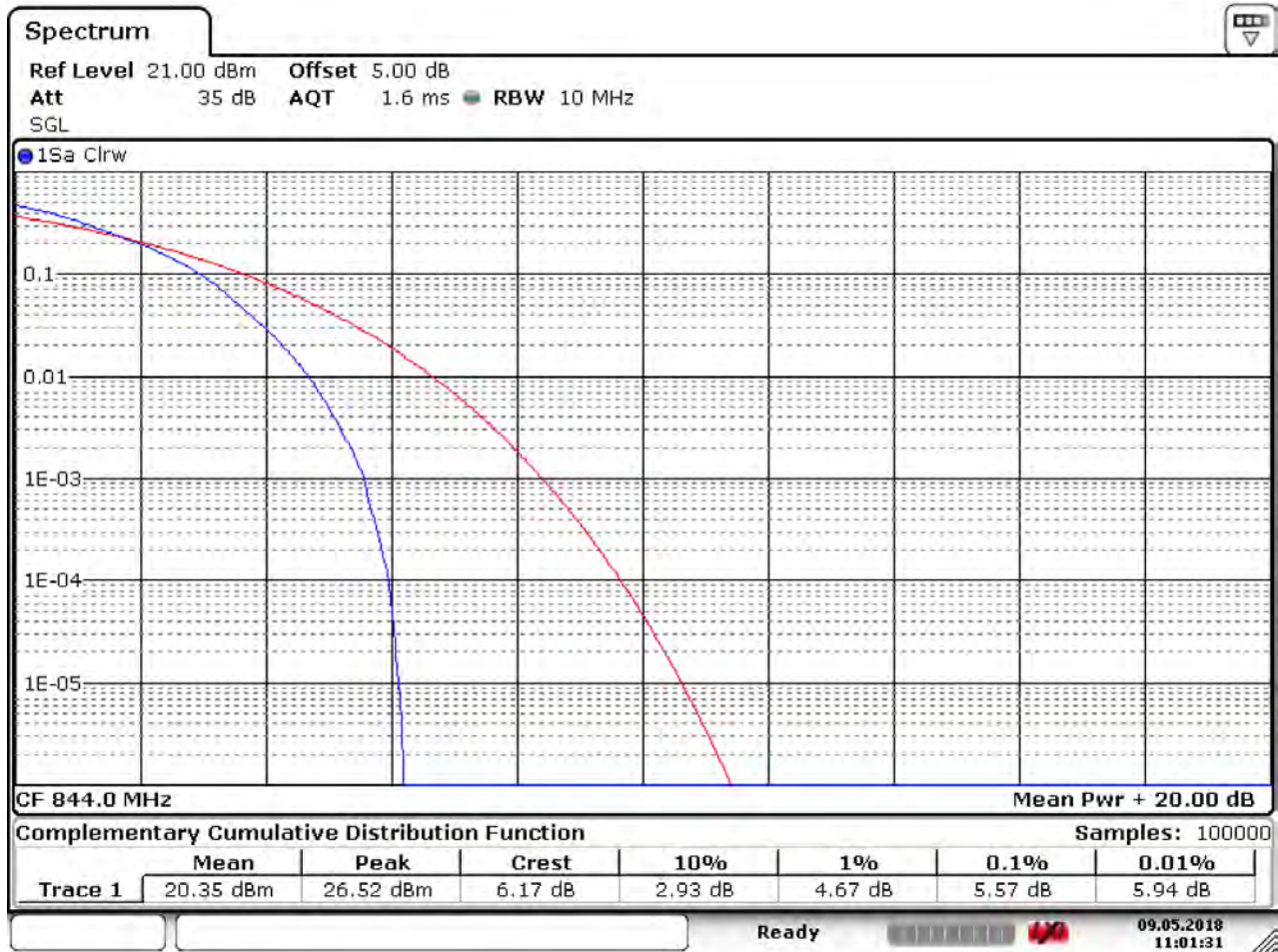
2.1.1.2.2 Test Channel = MCH



Date: 9.MAY.2018 11:00:45



2.1.1.2.3 Test Channel = HCH



Date: 9.MAY.2018 11:01:31





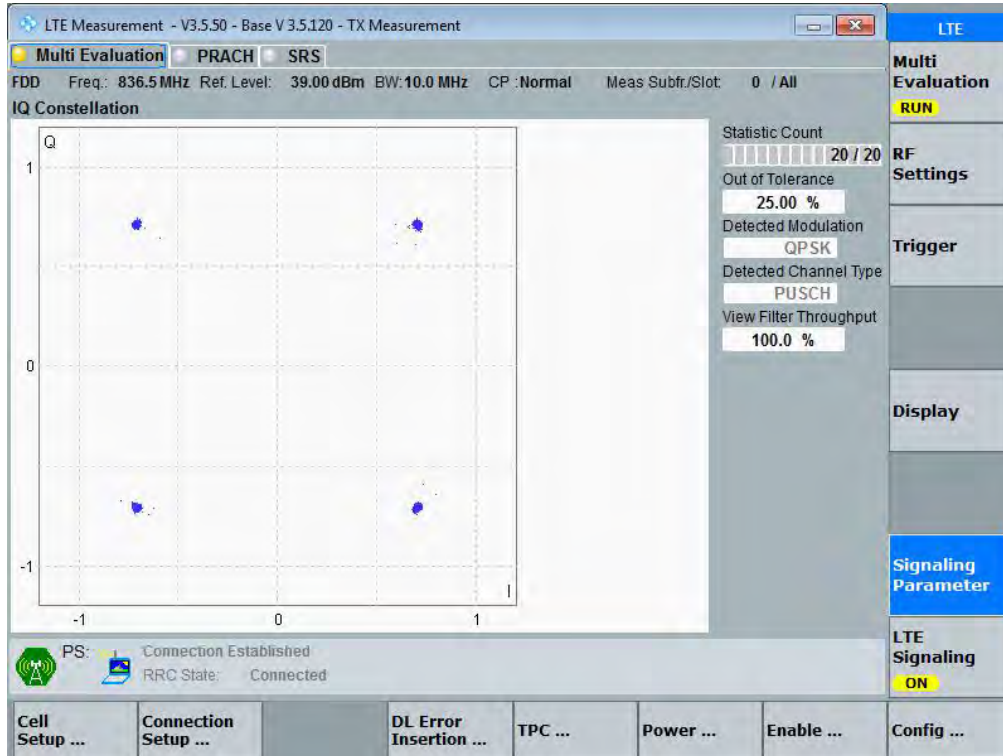
### 3 Modulation Characteristics

#### 3.1 For LTE

##### 3.1.1 Test Band = LTE band5

##### 3.1.1.1 Test Mode = LTE /TM1 10MHz

##### 3.1.1.1.1 Test Channel = MCH





3.1.1.2 Test Mode = LTE /TM2 10MHz  
3.1.1.2.1 Test Channel = MCH

The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.50 - Base V 3.5.120 - TX Measurement". It features a "Multi Evaluation" tab and a "PRACH" radio button. The interface shows the following parameters: FDD, Freq.: 836.5 MHz, Ref. Level: 39.00 dBm, BW: 10.0 MHz, CP: Normal, Meas Subfr./Slot: 0 / All. The "IQ Constellation" plot shows a 16-QAM constellation with 16 points. The "Statistic Count" is 20 / 20, and the "Out of Tolerance" is 0.00%. The "Detected Modulation" is 16-QAM, and the "Detected Channel Type" is PUSCH. The "View Filter Throughput" is 100.0%. The interface also includes a "Signaling Parameter" section with "LTE Signaling" set to "ON". At the bottom, there are several tabs: "Cell Setup ...", "Connection Setup ...", "DL Error Insertion ...", "TPC ...", "Power ...", "Enable ...", and "Config ...".



## 4 Bandwidth

### Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
Band 5	TM1/1.4MHz	LCH	1.09	1.26	PASS
		MCH	1.08	1.24	PASS
		HCH	1.09	1.25	PASS
	TM2/1.4MHz	LCH	1.08	1.28	PASS
		MCH	1.08	1.27	PASS
		HCH	1.09	1.24	PASS
	TM1/ 3MHz	LCH	2.68	2.84	PASS
		MCH	2.68	2.84	PASS
		HCH	2.68	2.84	PASS
	TM2/3MHz	LCH	2.67	2.84	PASS
		MCH	2.67	2.84	PASS
		HCH	2.67	2.83	PASS
	TM1/ 5MHz	LCH	4.47	5.01	PASS
		MCH	4.47	4.81	PASS
		HCH	4.47	4.89	PASS
	TM2/ 5MHz	LCH	4.46	4.84	PASS
		MCH	4.47	4.84	PASS
		HCH	4.47	4.81	PASS
	TM1/10MHz	LCH	8.91	9.32	PASS
		MCH	8.91	9.35	PASS
		HCH	8.93	9.46	PASS
TM2/ 10MHz	LCH	8.91	9.32	PASS	
	MCH	8.92	9.39	PASS	
	HCH	8.89	9.32	PASS	



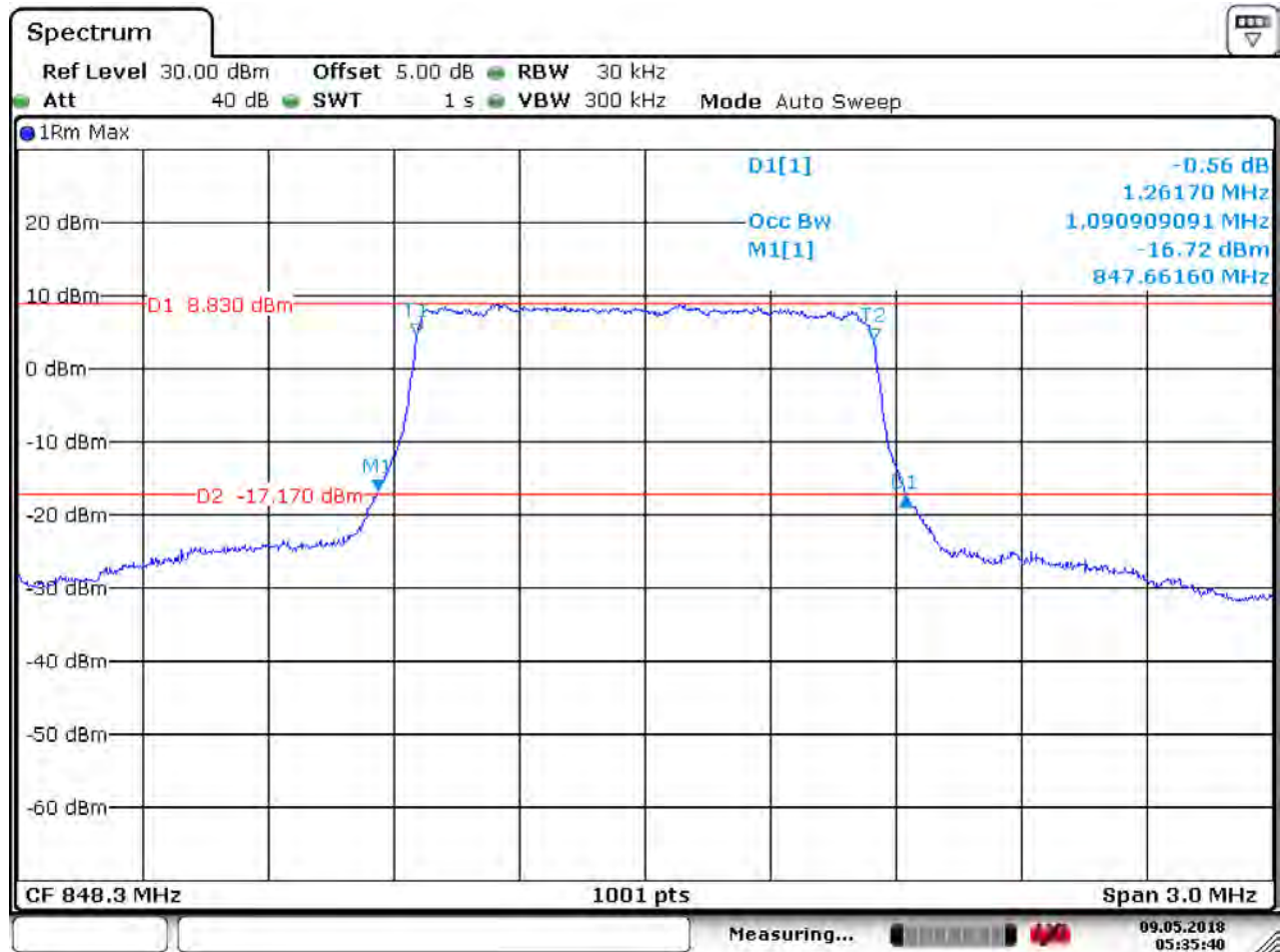
Part II –Test Plots

4.1 For LTE

4.1.1 Test Band = LTE band5

4.1.1.1 Test Mode = LTE/TM1 1.4MHz

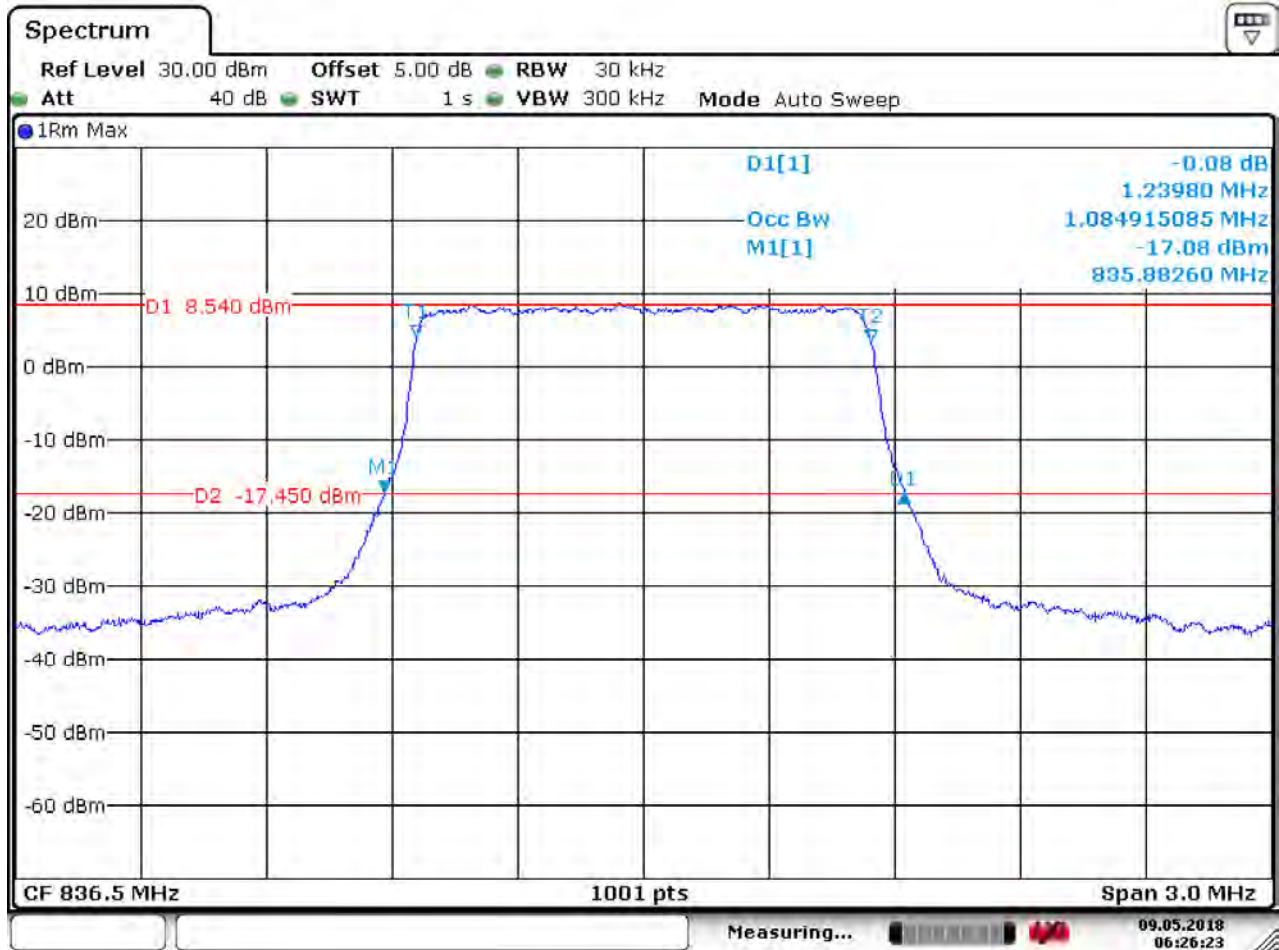
4.1.1.1.1 Test Channel = LCH



Date: 9.MAY.2018 05:35:41

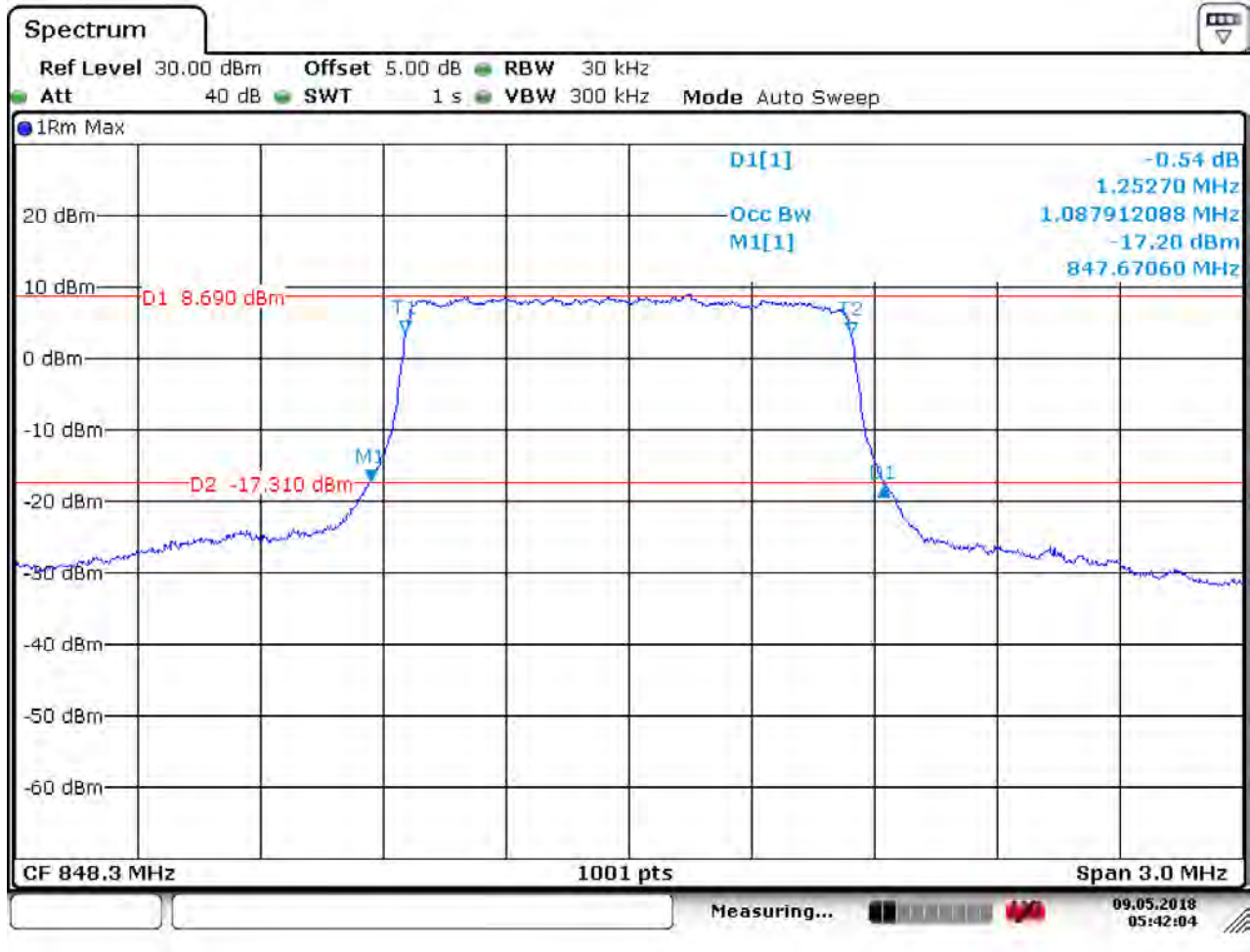


4.1.1.1.2 Test Channel = MCH



Date: 9.MAY.2018 06:26:24

**4.1.1.1.3 Test Channel = HCH**

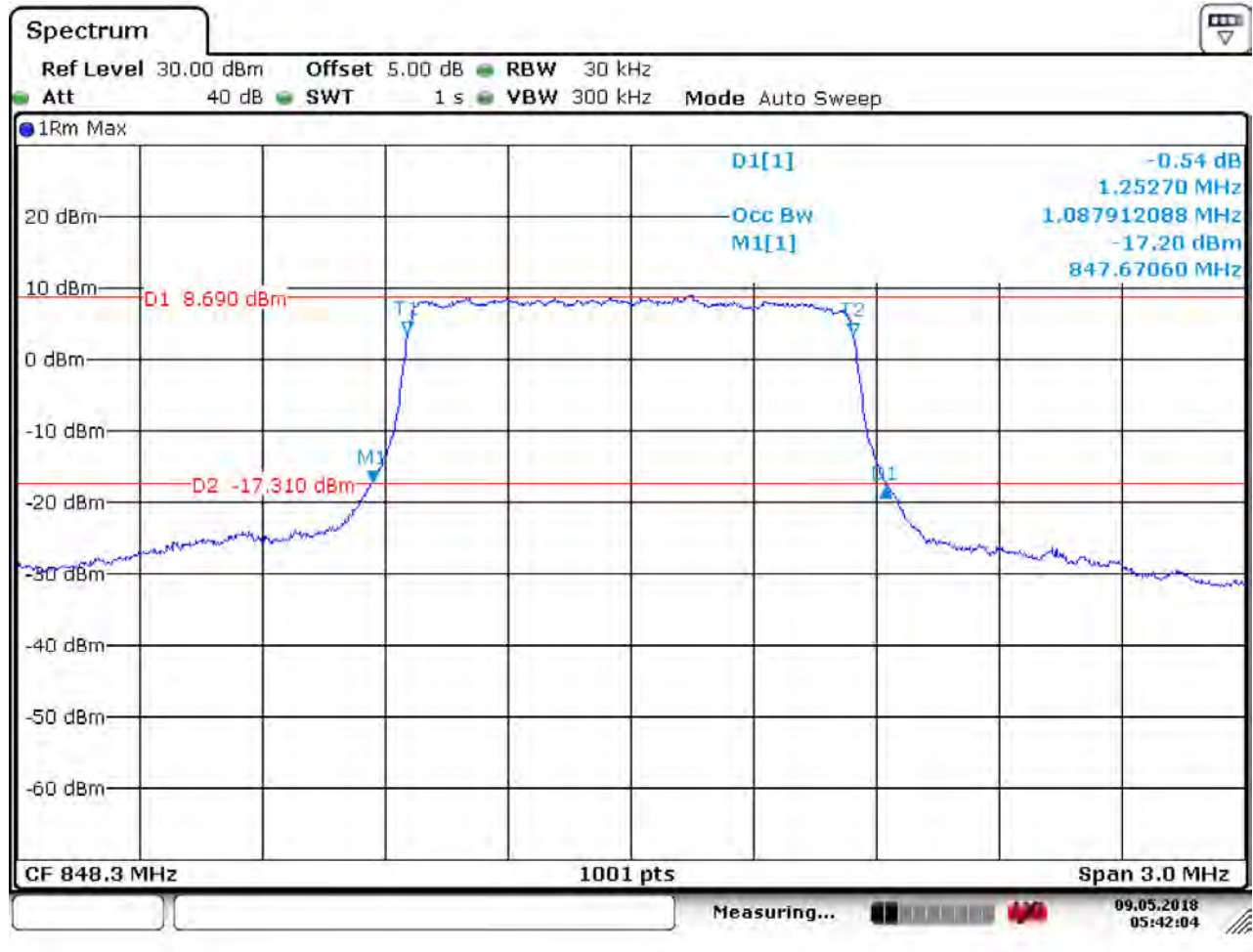


Date: 9.MAY.2018 05:42:04



4.1.1.2 Test Mode = LTE/TM2 1.4MHz

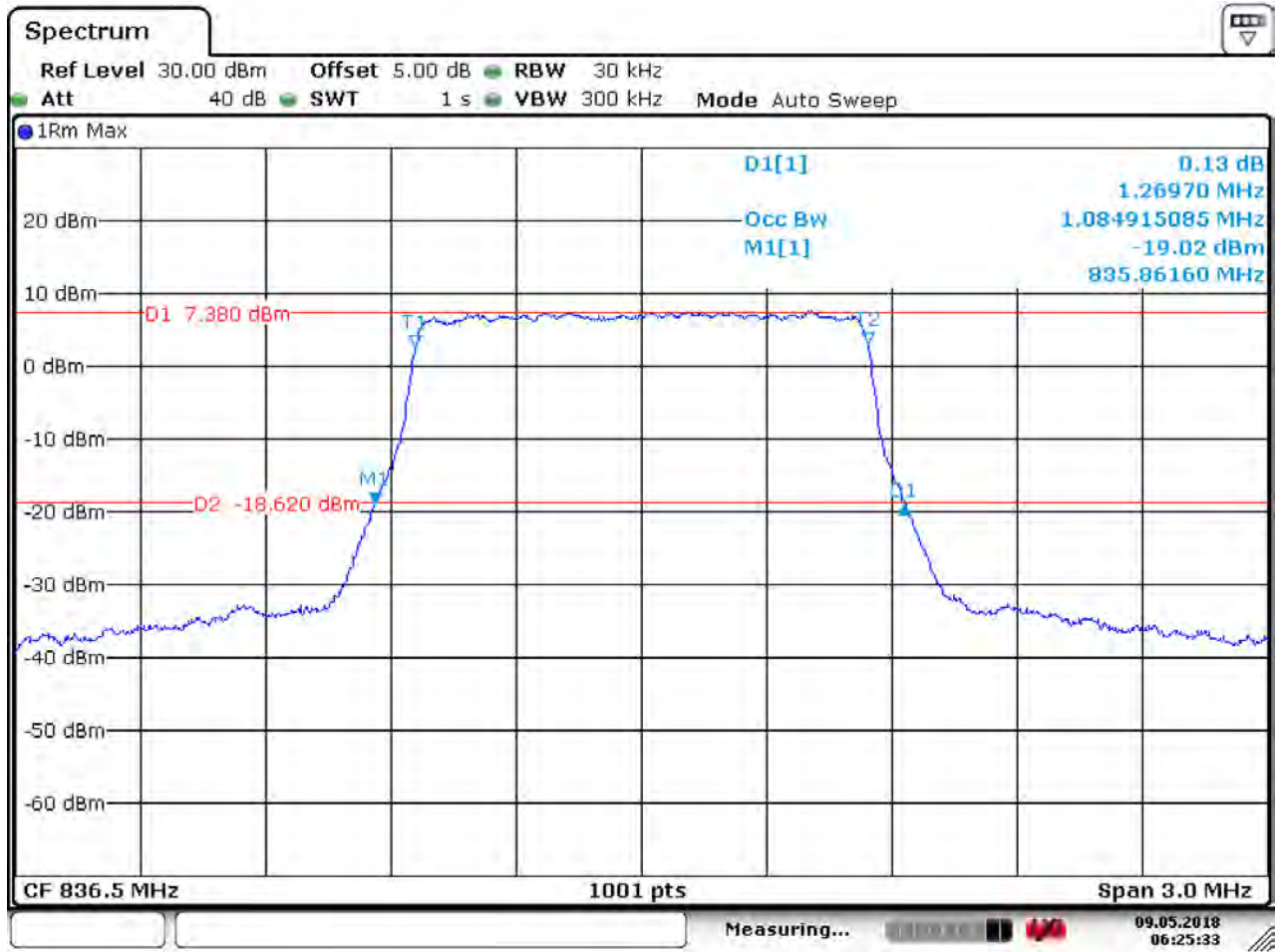
4.1.1.2.1 Test Channel = LCH



Date: 9.MAY.2018 05:42:04



4.1.1.2.2 Test Channel = MCH

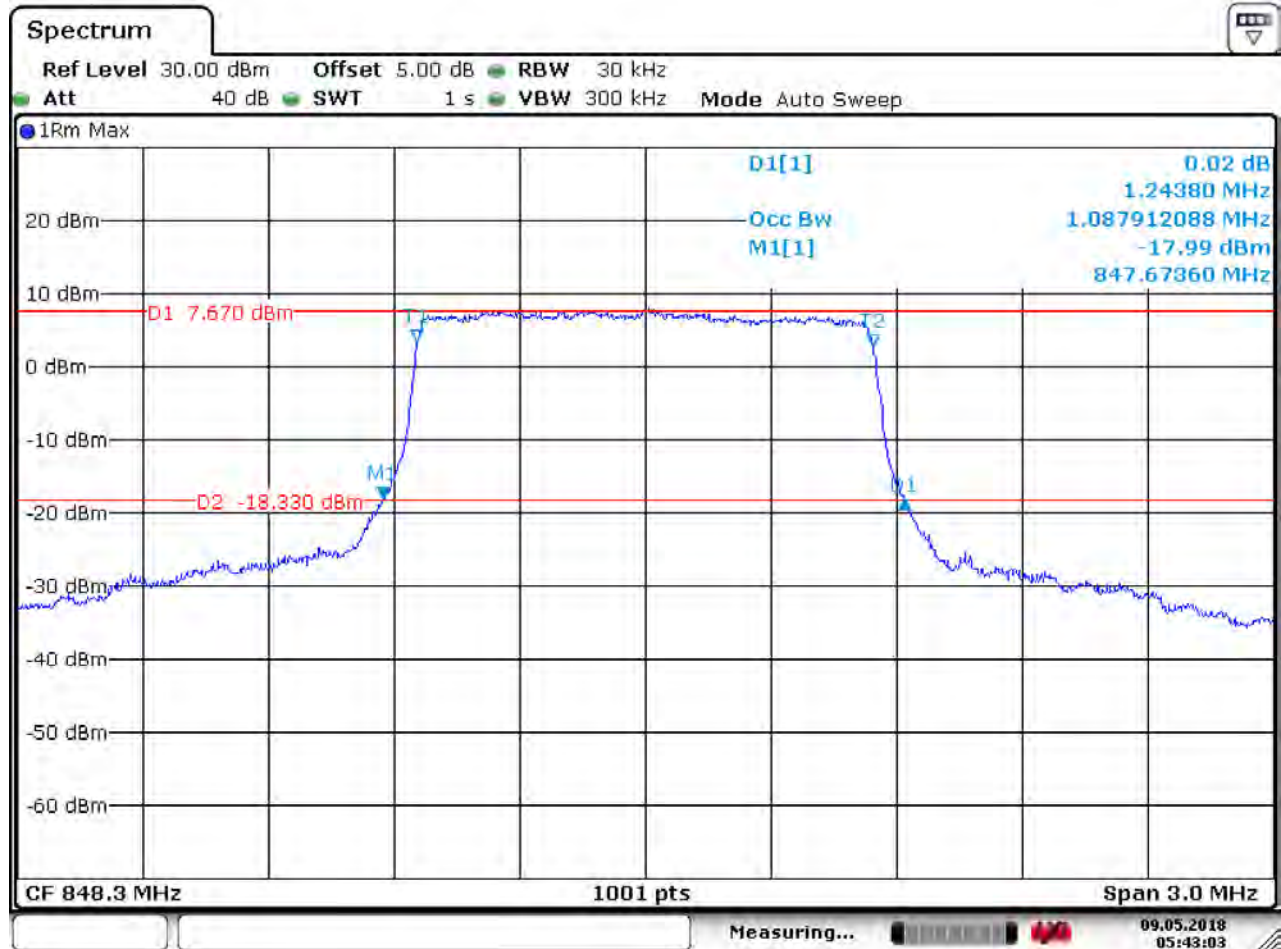


Date: 9.MAY.2018 06:25:33





4.1.1.2.3 Test Channel = HCH

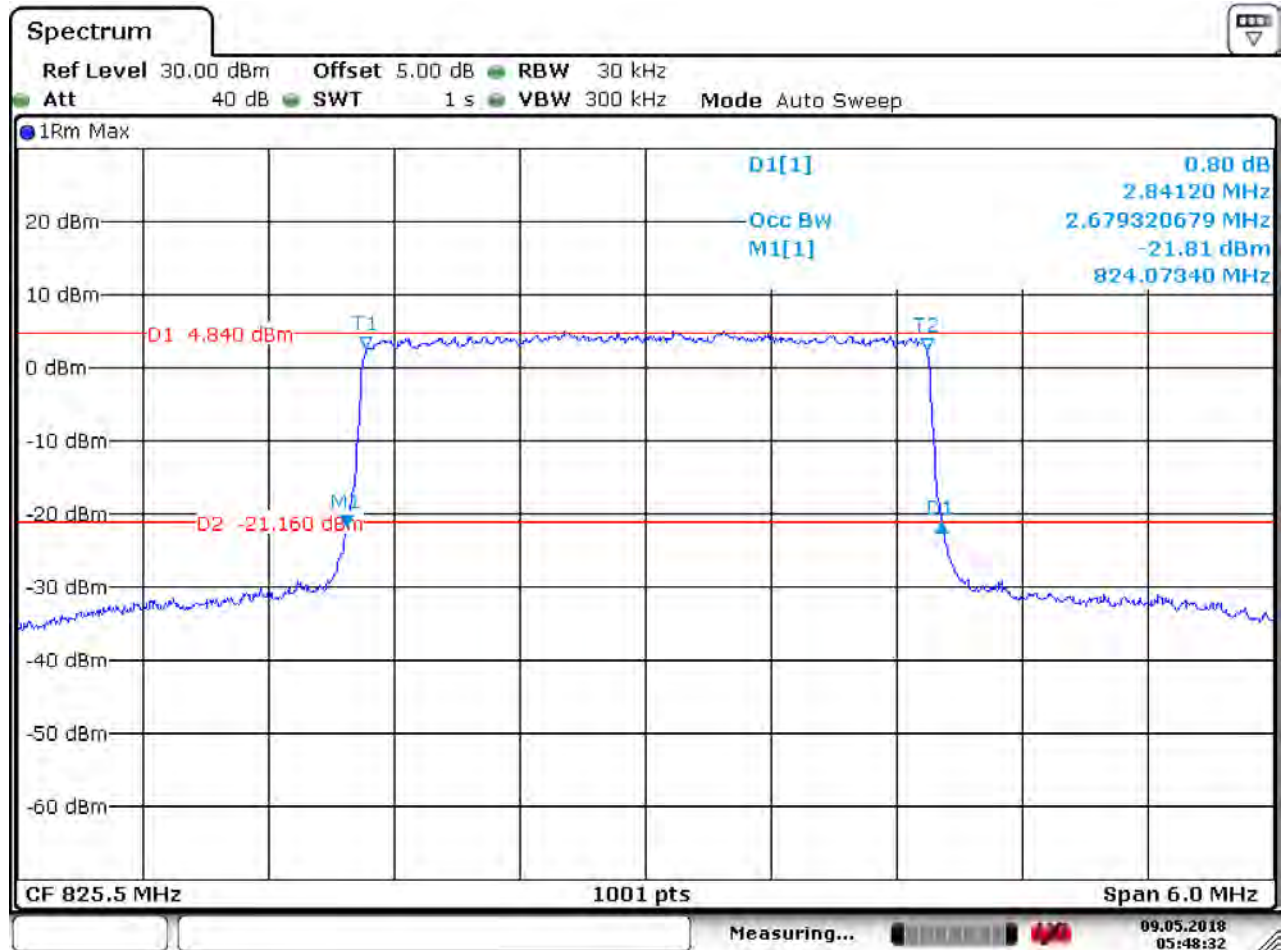


Date: 9.MAY.2018 05:43:04



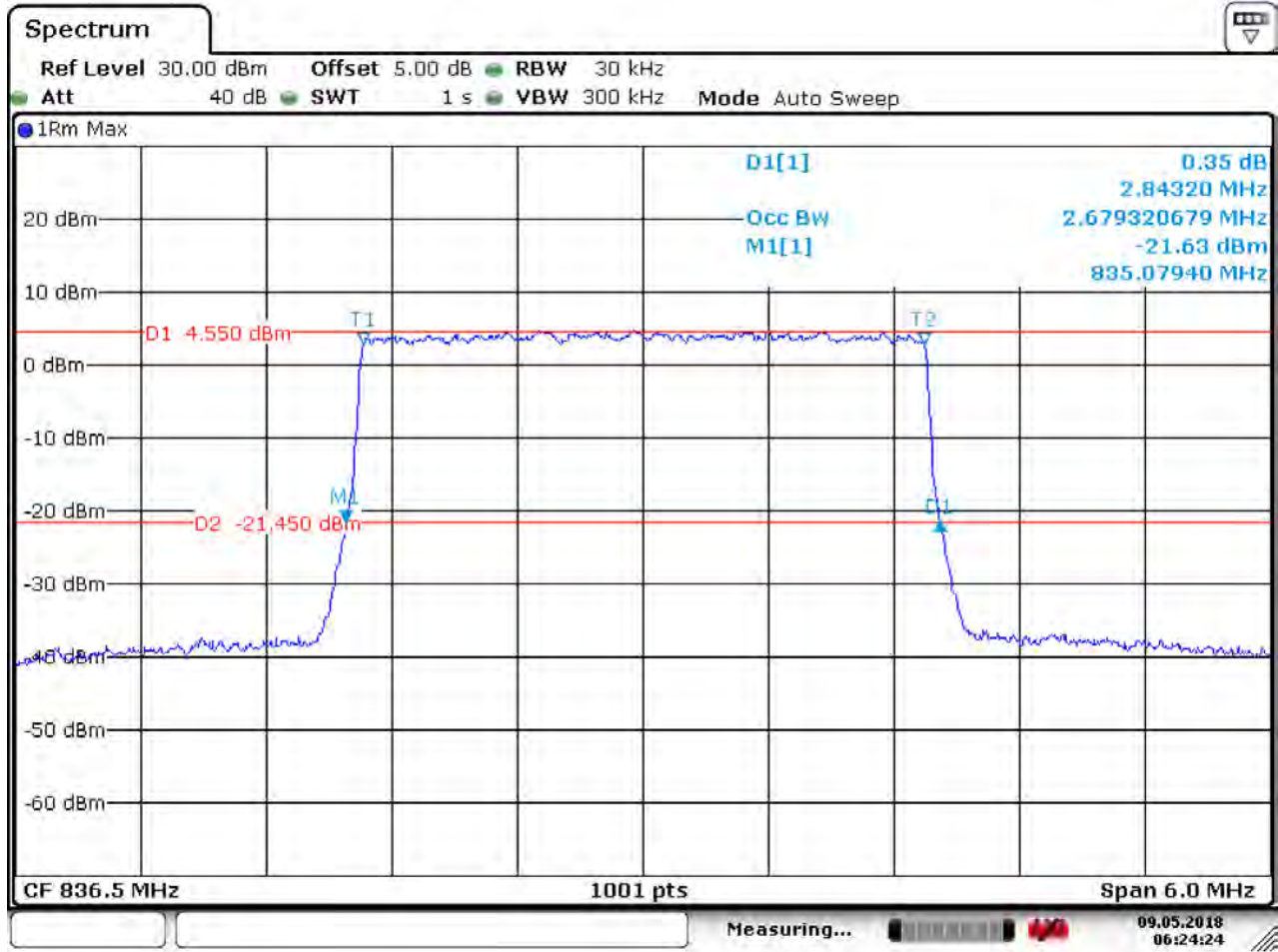
4.1.1.3 Test Mode = LTE/TM1 3MHz

4.1.1.3.1 Test Channel = LCH



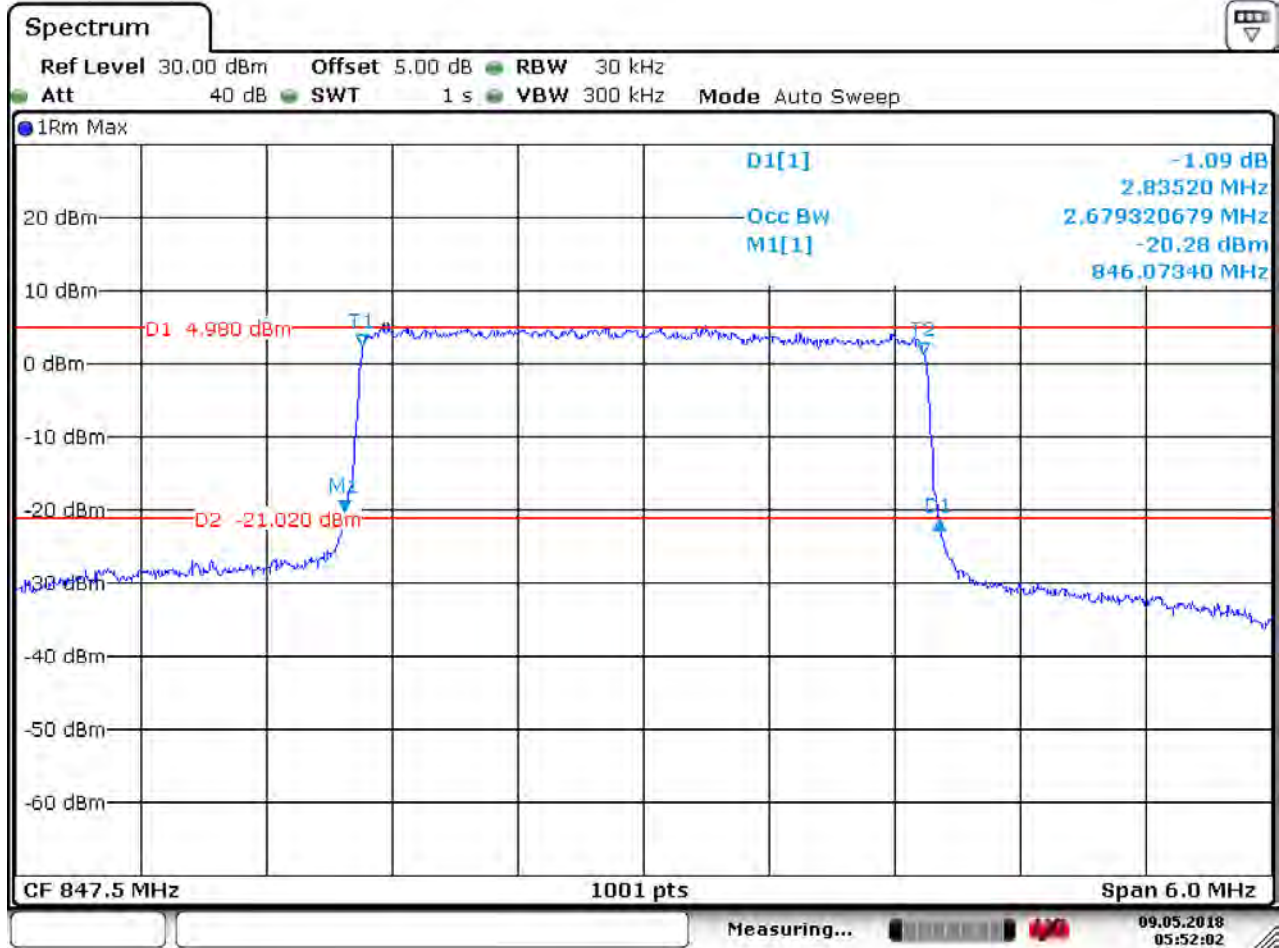
Date: 9.MAY.2018 05:48:32

**4.1.1.3.2 Test Channel = MCH**



Date: 9.MAY.2018 06:24:24

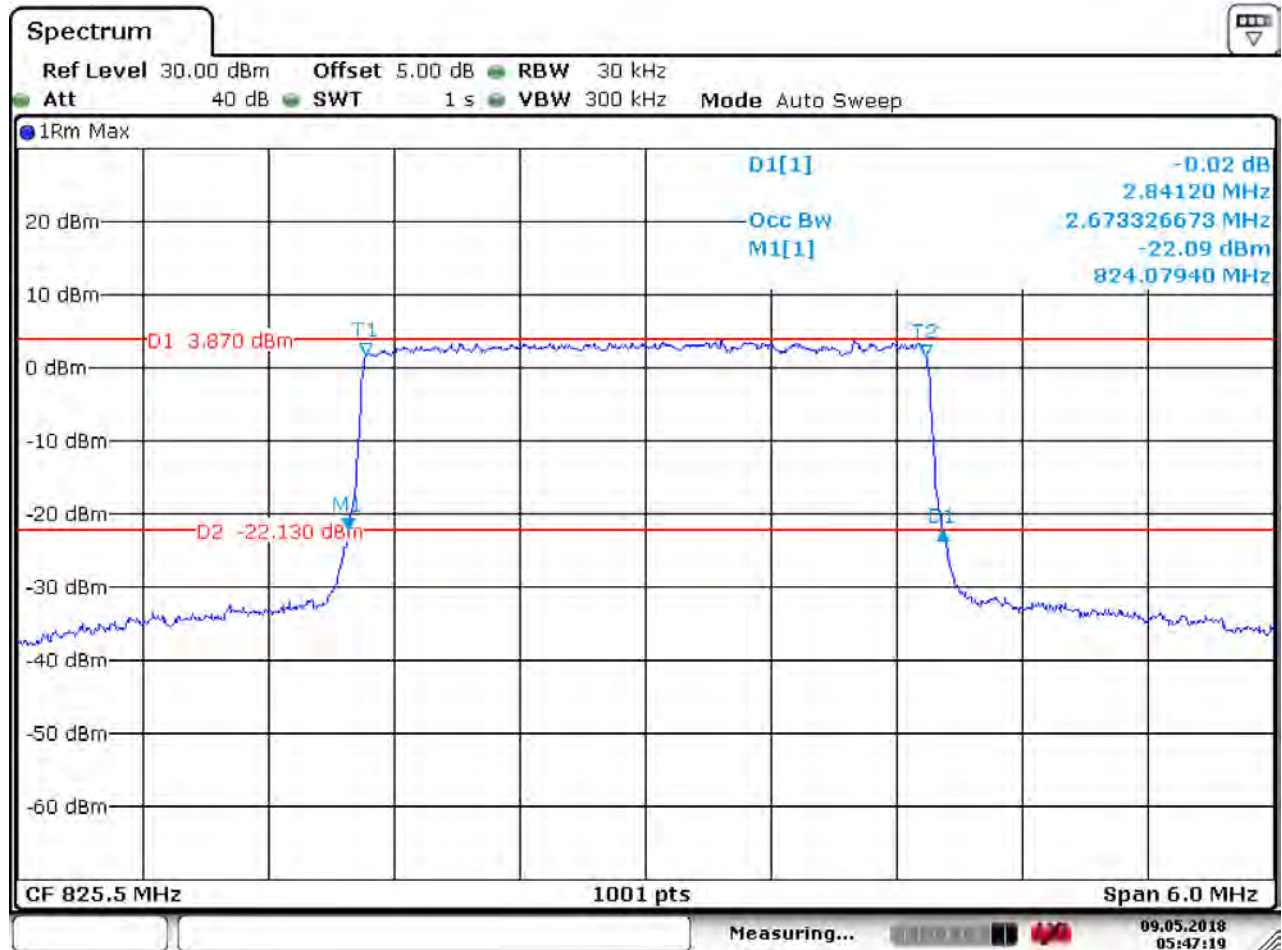
**4.1.1.3.3 Test Channel = HCH**



Date: 9.MAY.2018 05:52:02

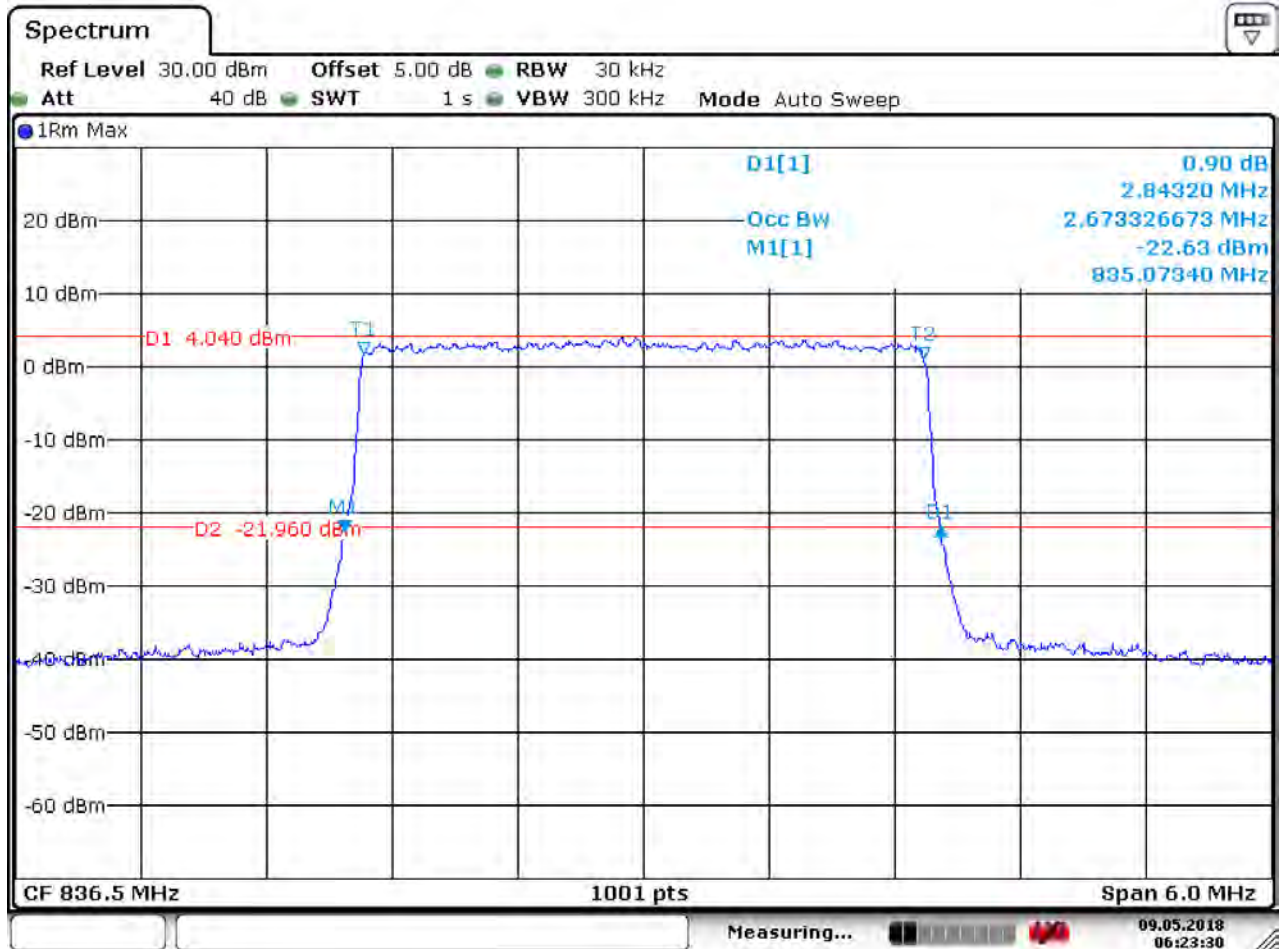
4.1.1.4 Test Mode = LTE/TM2 3MHz

4.1.1.4.1 Test Channel = LCH



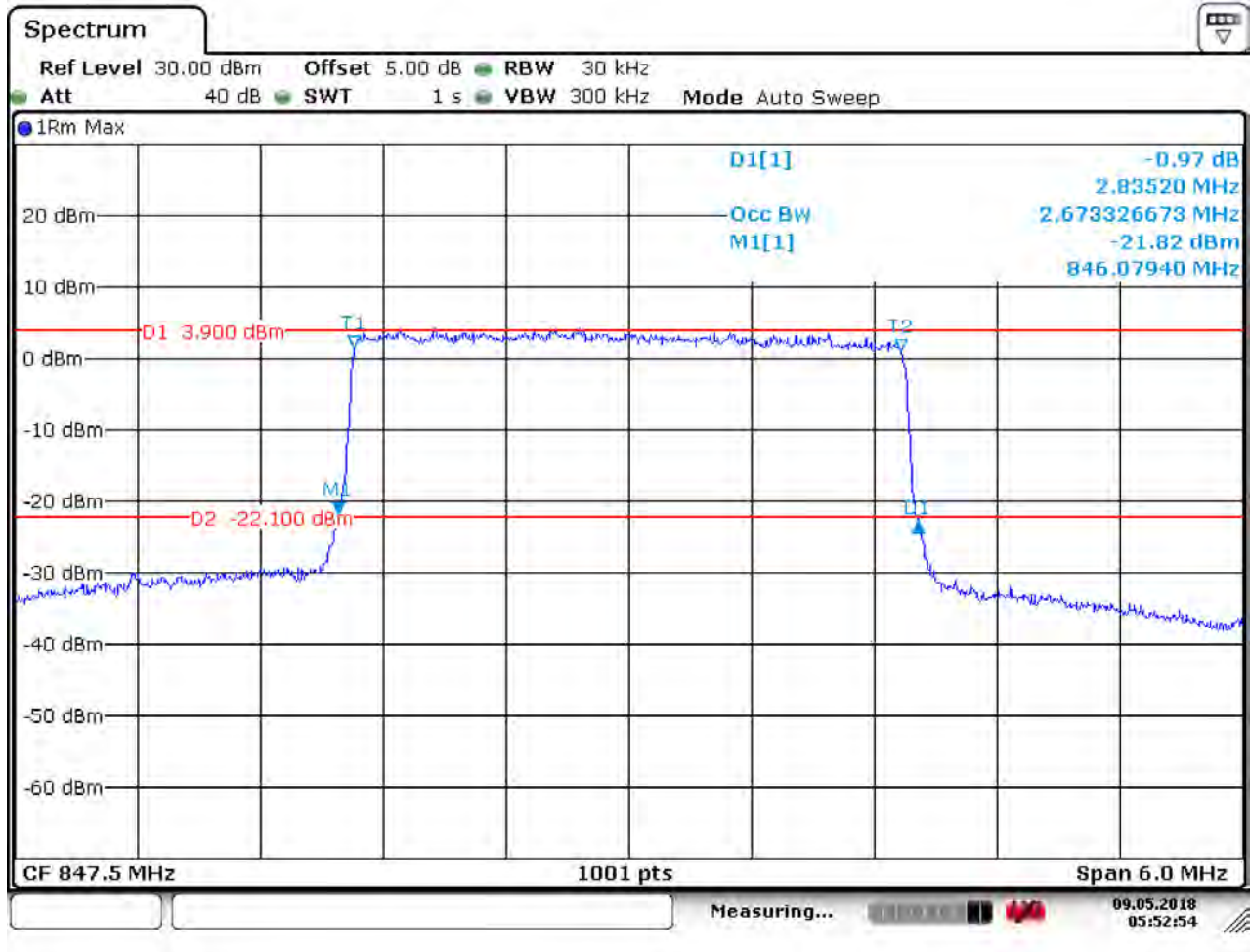
Date: 9.MAY.2018 05:47:19

**4.1.1.4.2 Test Channel = MCH**



Date: 9.MAY.2018 06:23:30

**4.1.1.4.3 Test Channel = HCH**

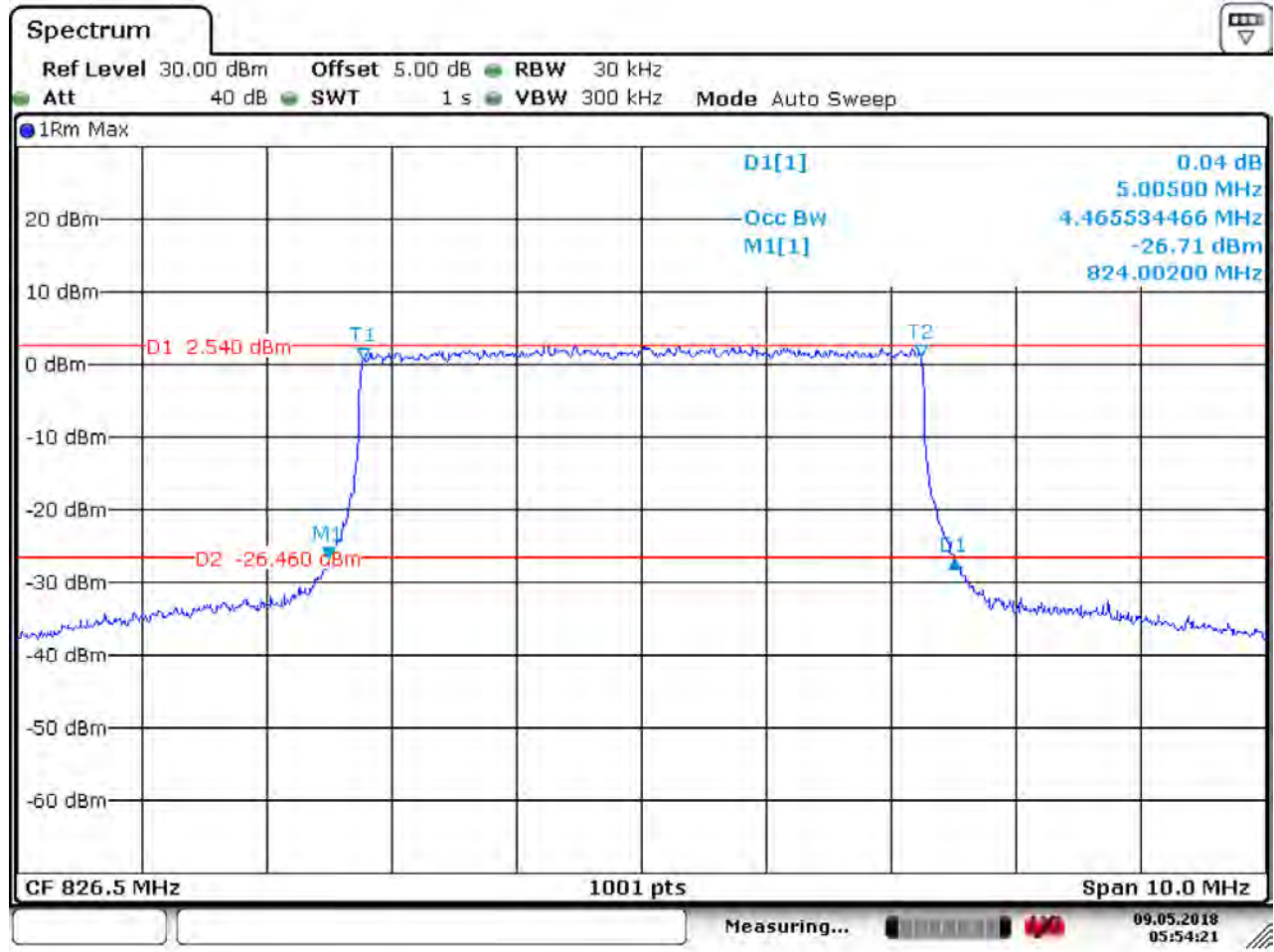


Date: 9.MAY.2018 05:52:54



4.1.1.5 Test Mode = LTE/TM1 5MHz

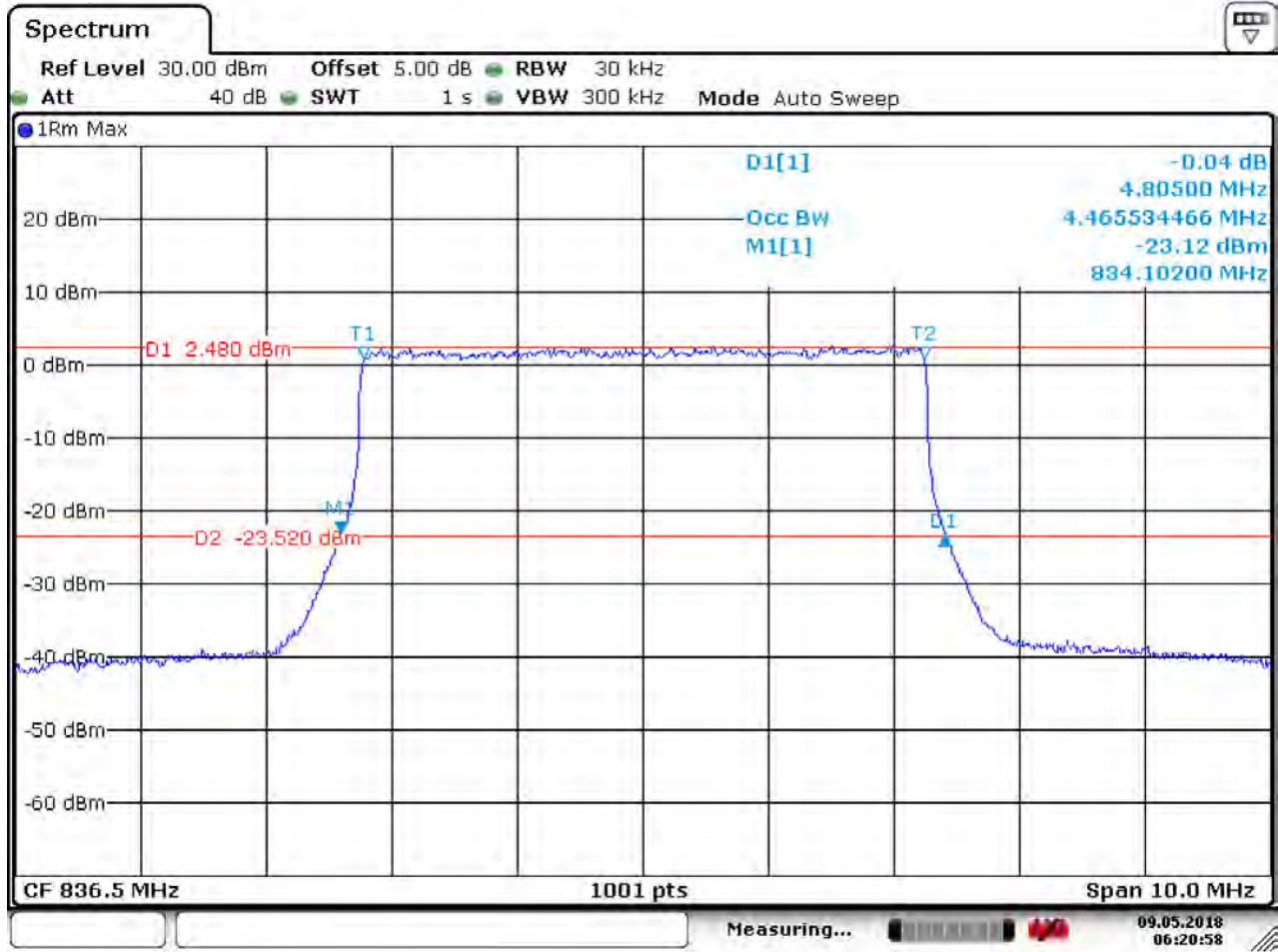
4.1.1.5.1 Test Channel = LCH



Date: 9.MAY.2018 05:54:21

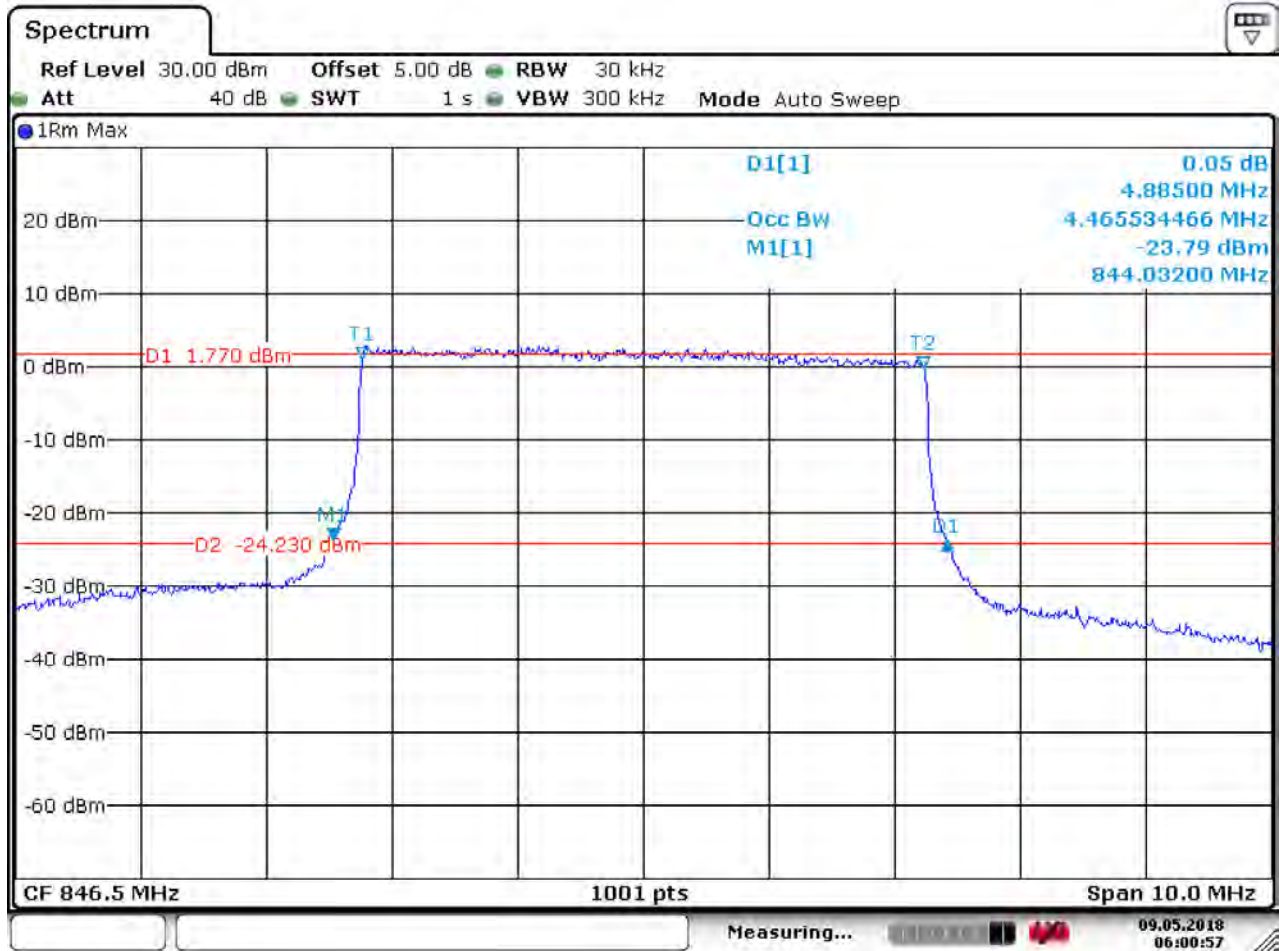


**4.1.1.5.2 Test Channel = MCH**



Date: 9.MAY.2018 06:20:58

**4.1.1.5.3 Test Channel = HCH**

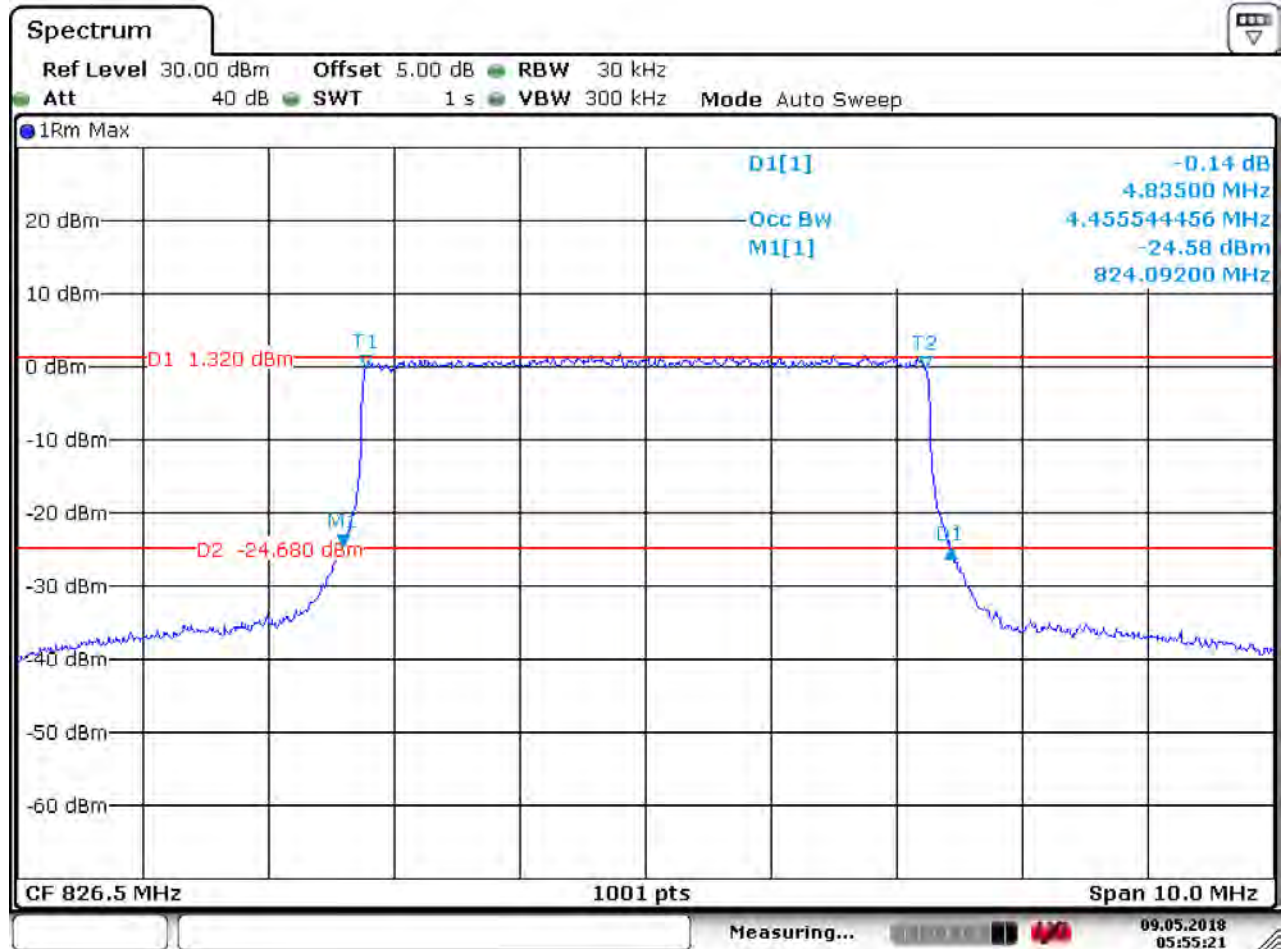


Date: 9.MAY.2018 06:00:58



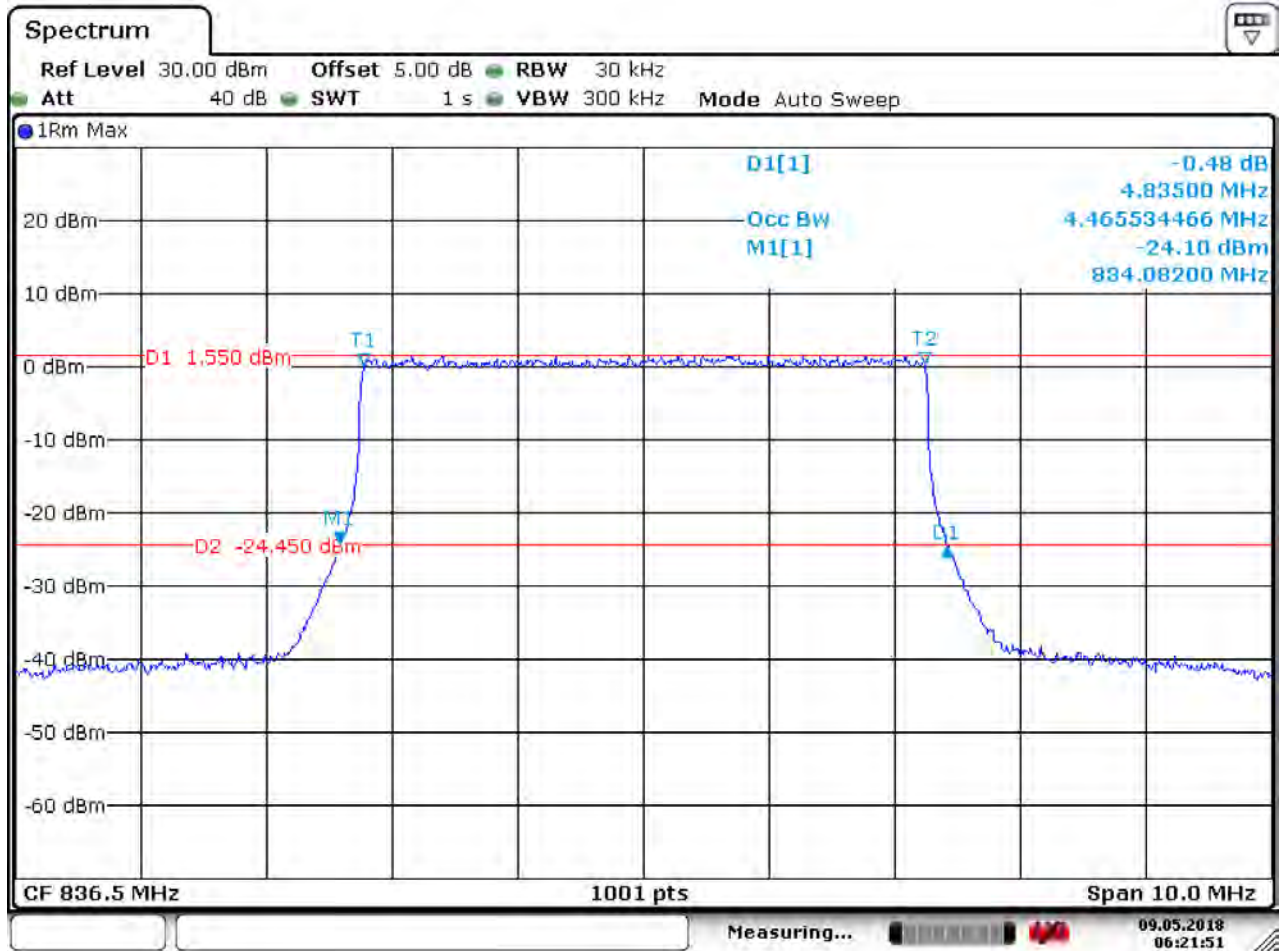
4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH



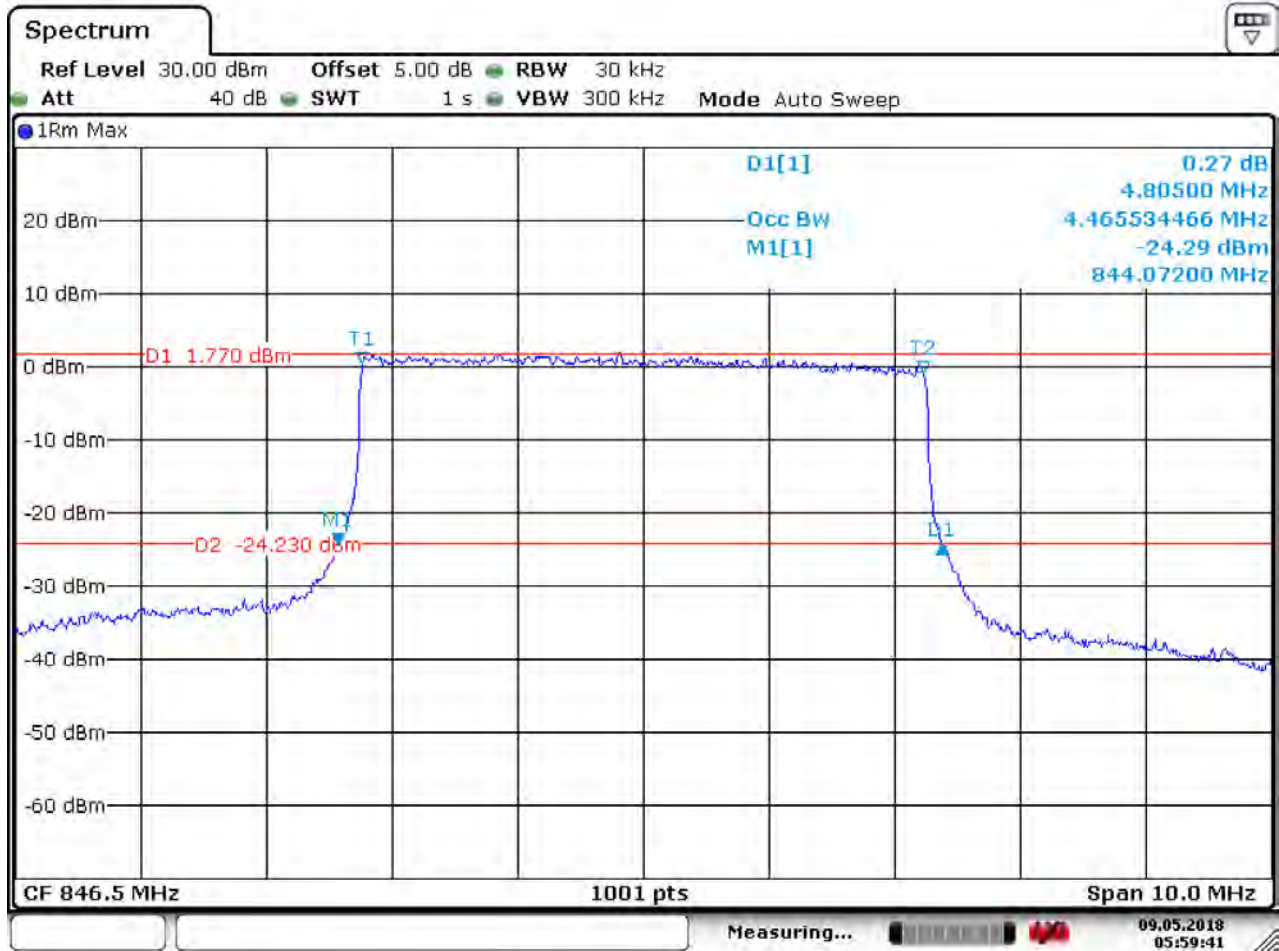
Date: 9.MAY.2018 05:55:21

**4.1.1.6.2 Test Channel = MCH**



Date: 9.MAY.2018 06:21:51

**4.1.1.6.3 Test Channel = HCH**

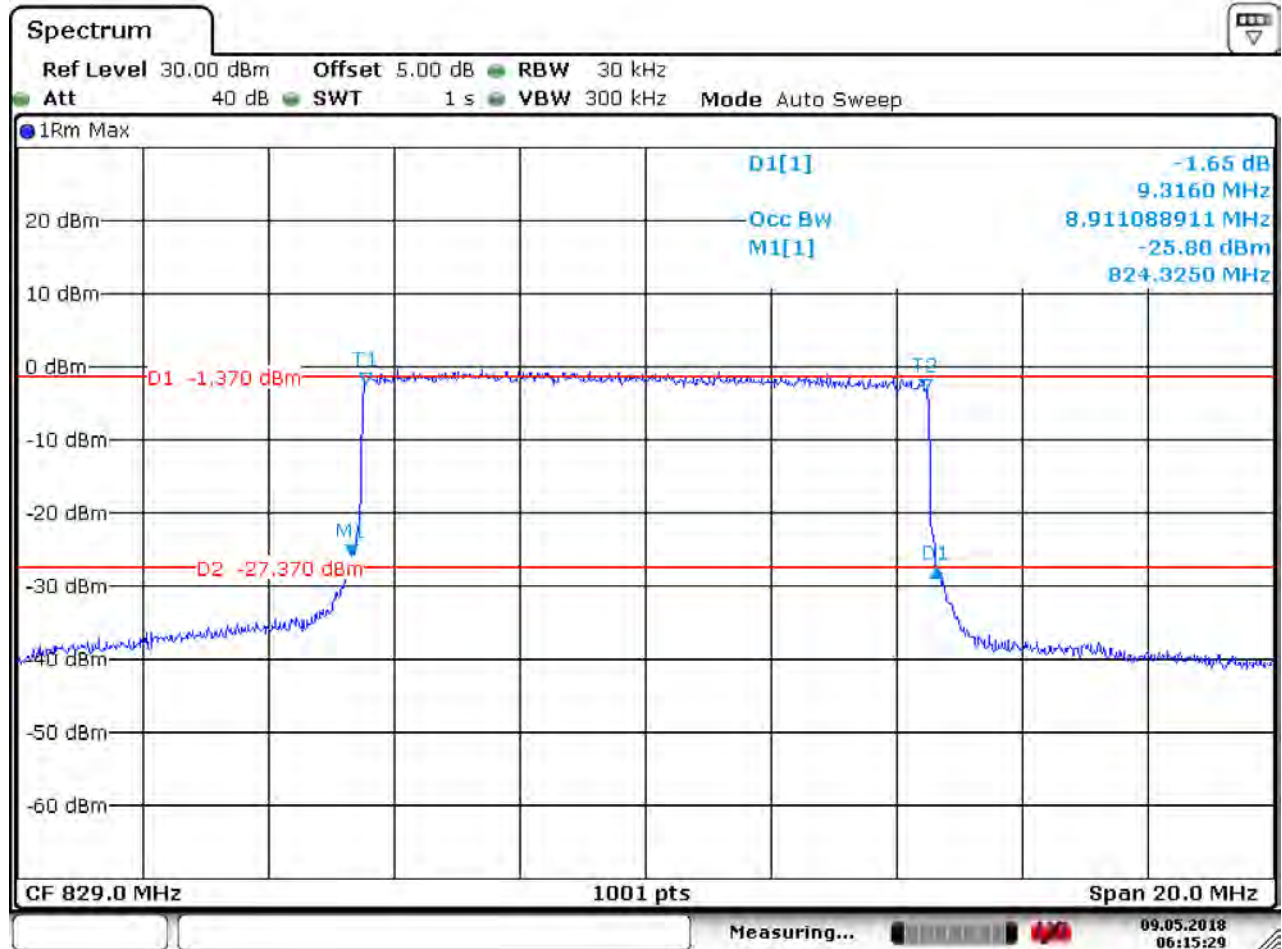


Date: 9.MAY.2018 05:59:42



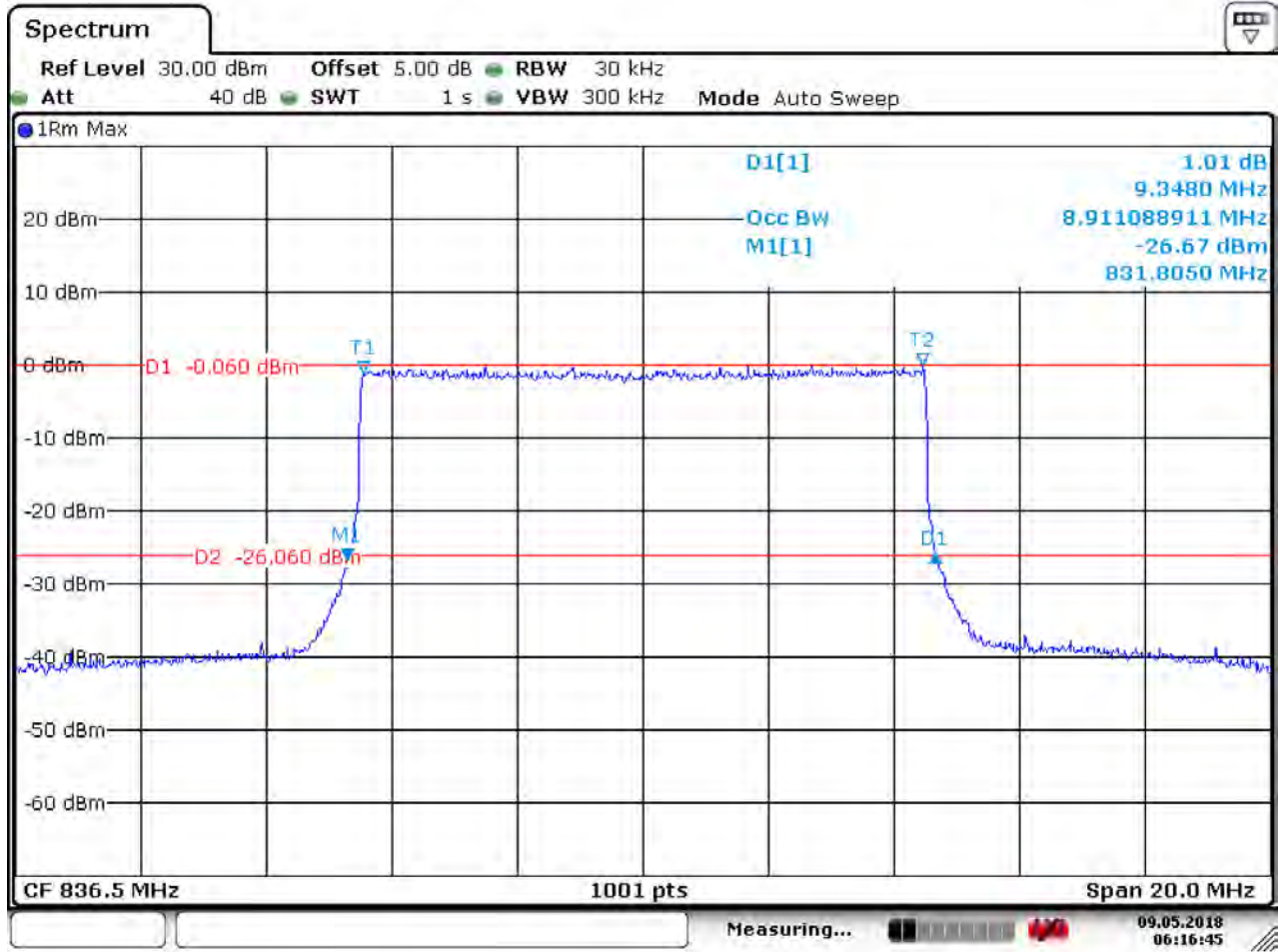
4.1.1.7 Test Mode = LTE/TM1 10MHz

4.1.1.7.1 Test Channel = LCH



Date: 9.MAY.2018 06:15:30

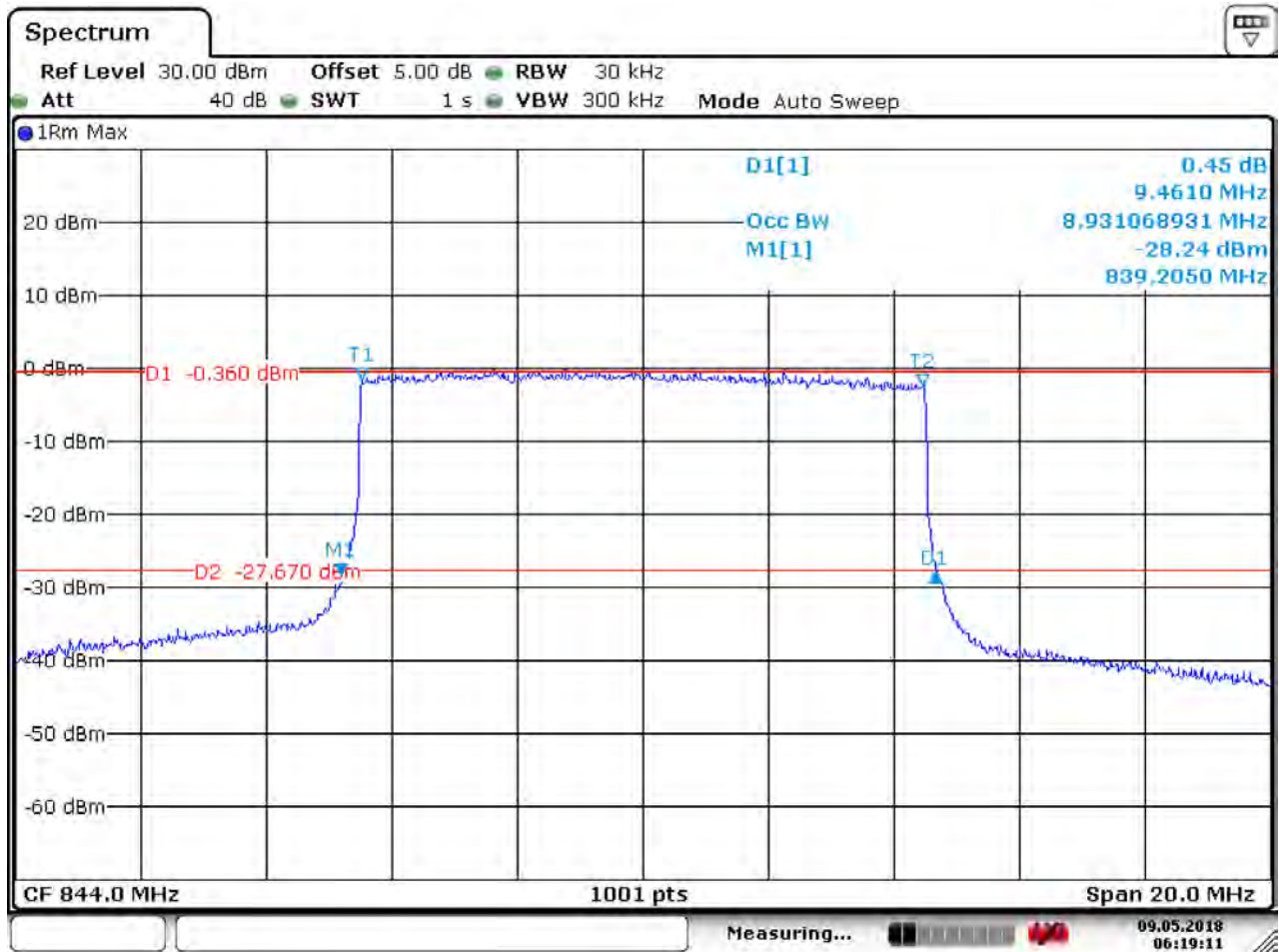
4.1.1.7.2 Test Channel = MCH



Date: 9.MAY.2018 06:16:46



4.1.1.7.3 Test Channel = HCH



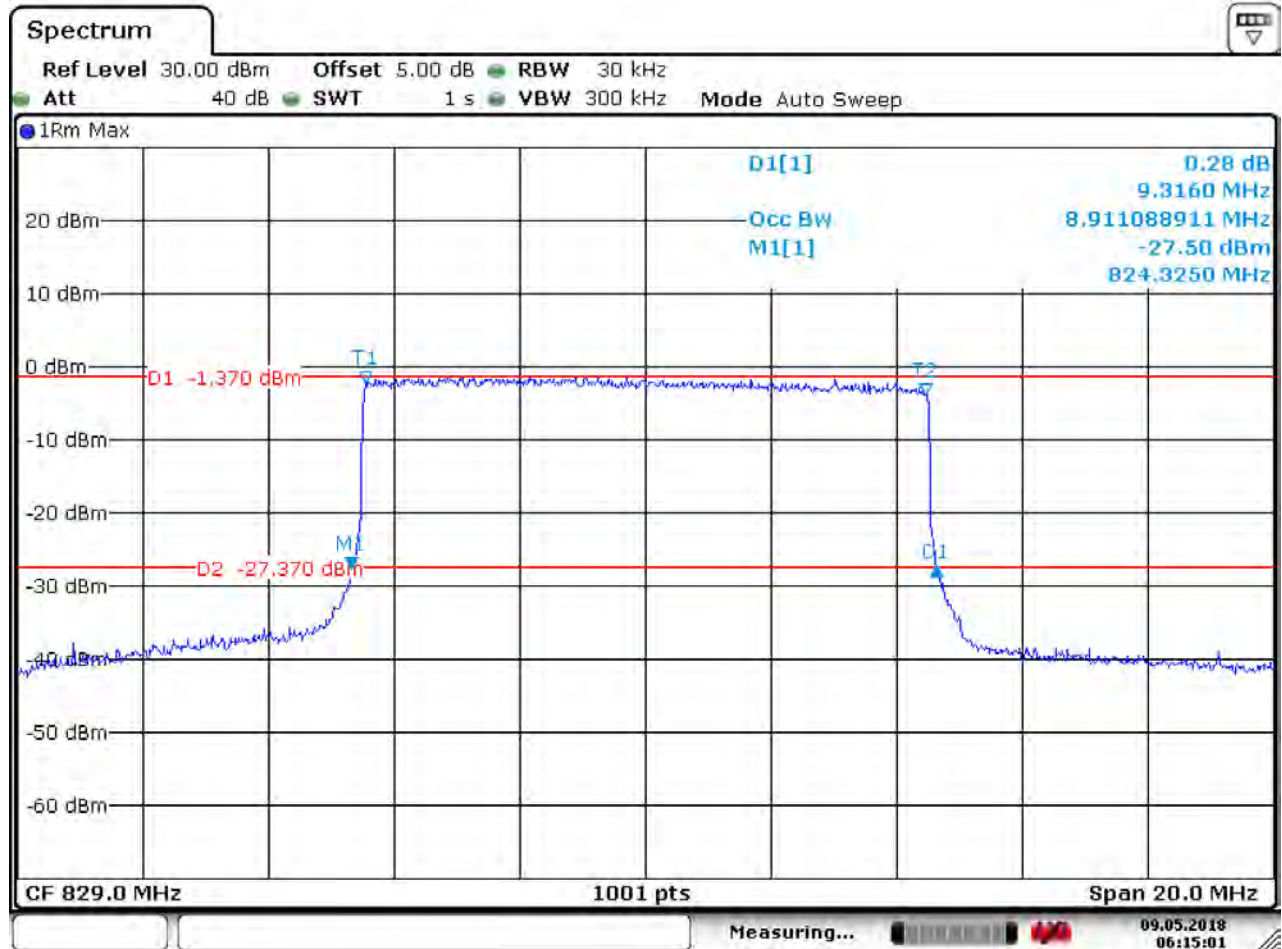
Date: 9.MAY.2018 06:19:12





4.1.1.8 Test Mode = LTE/TM2 10MHz

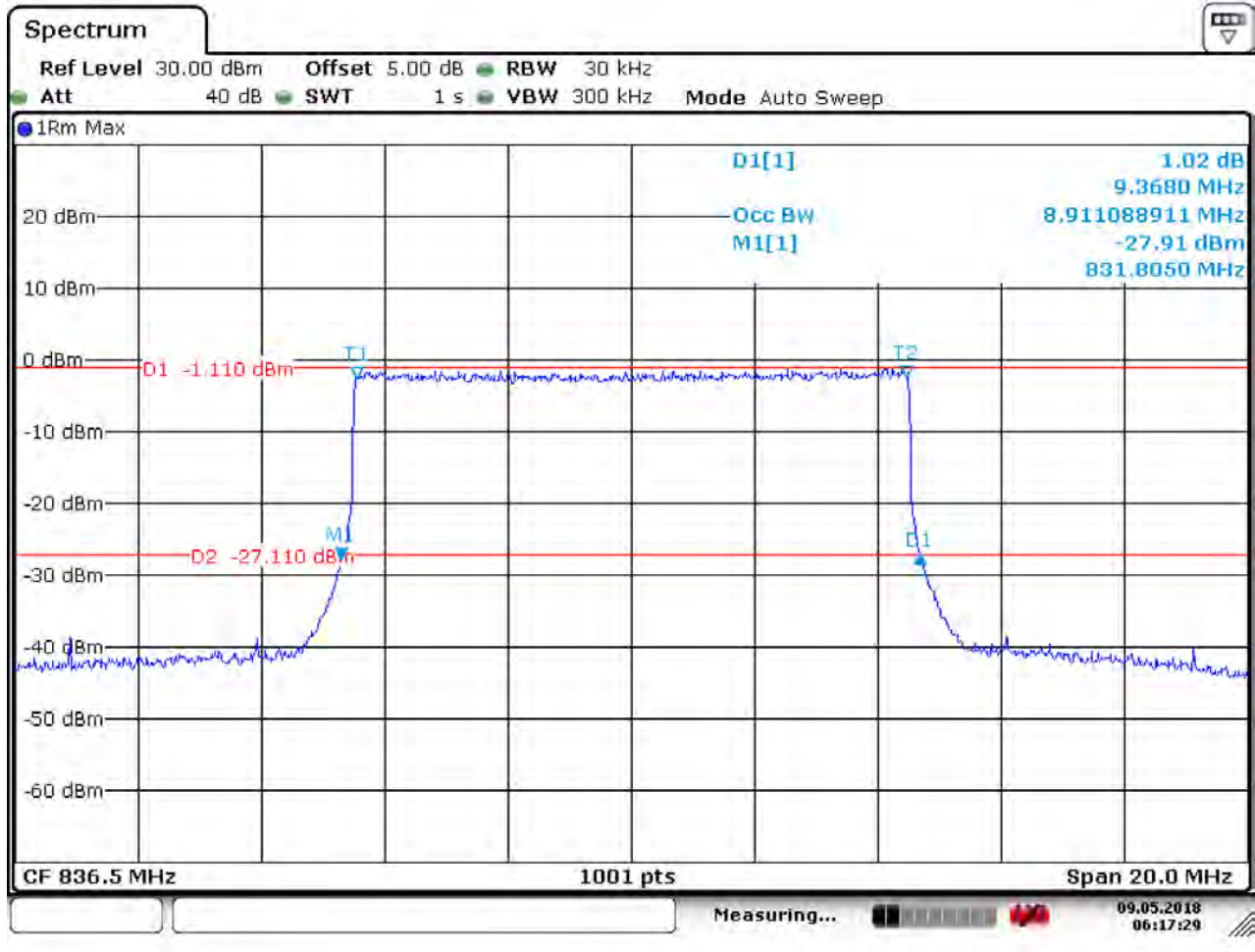
4.1.1.8.1 Test Channel = LCH



Date: 9.MAY.2018 06:15:01

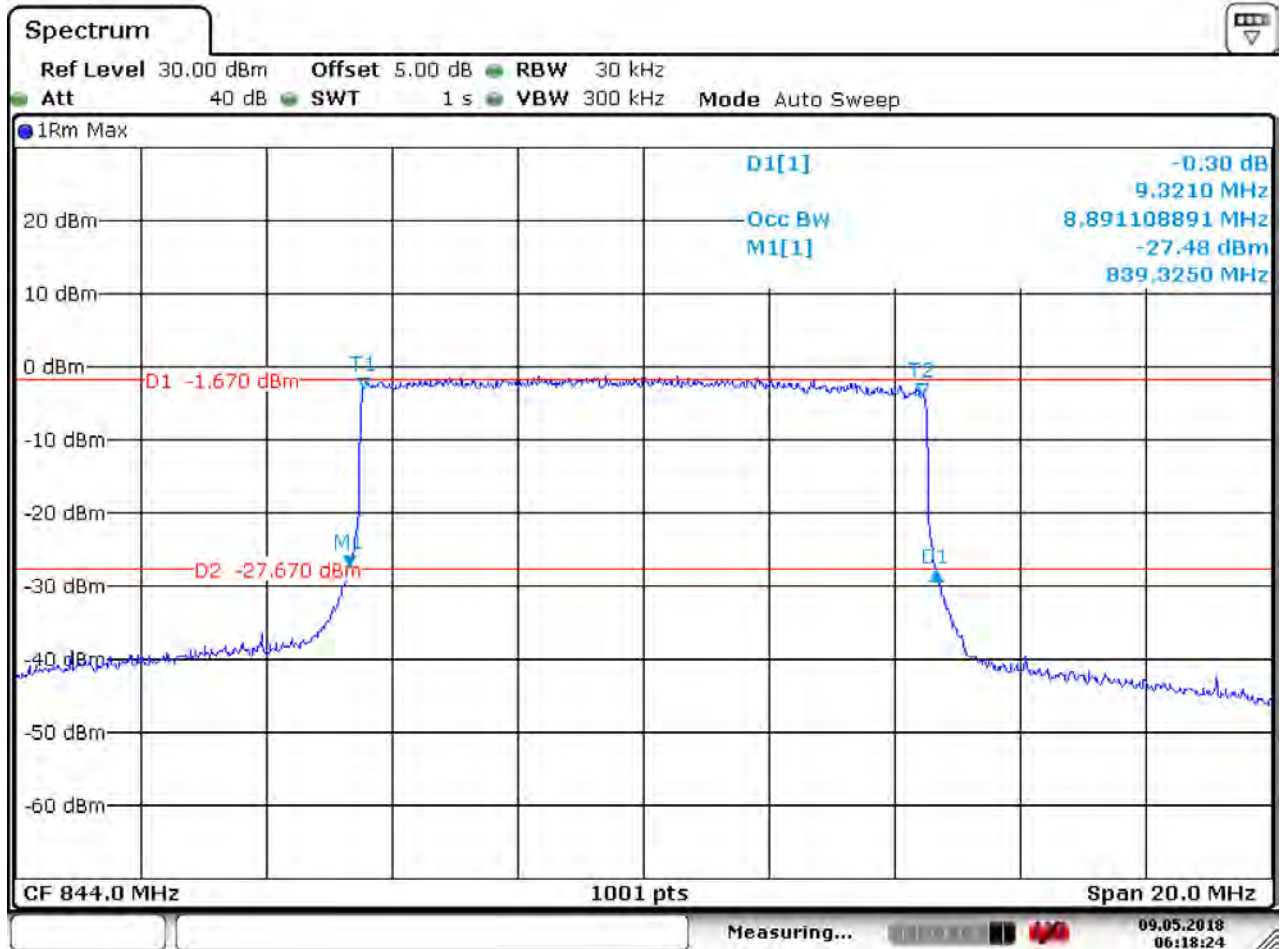


4.1.1.8.2 Test Channel = MCH



Date: 9.MAY.2018 06:17:29

**4.1.1.8.3 Test Channel = HCH**



Date: 9.MAY.2018 06:18:24

## 5 Band Edges Compliance

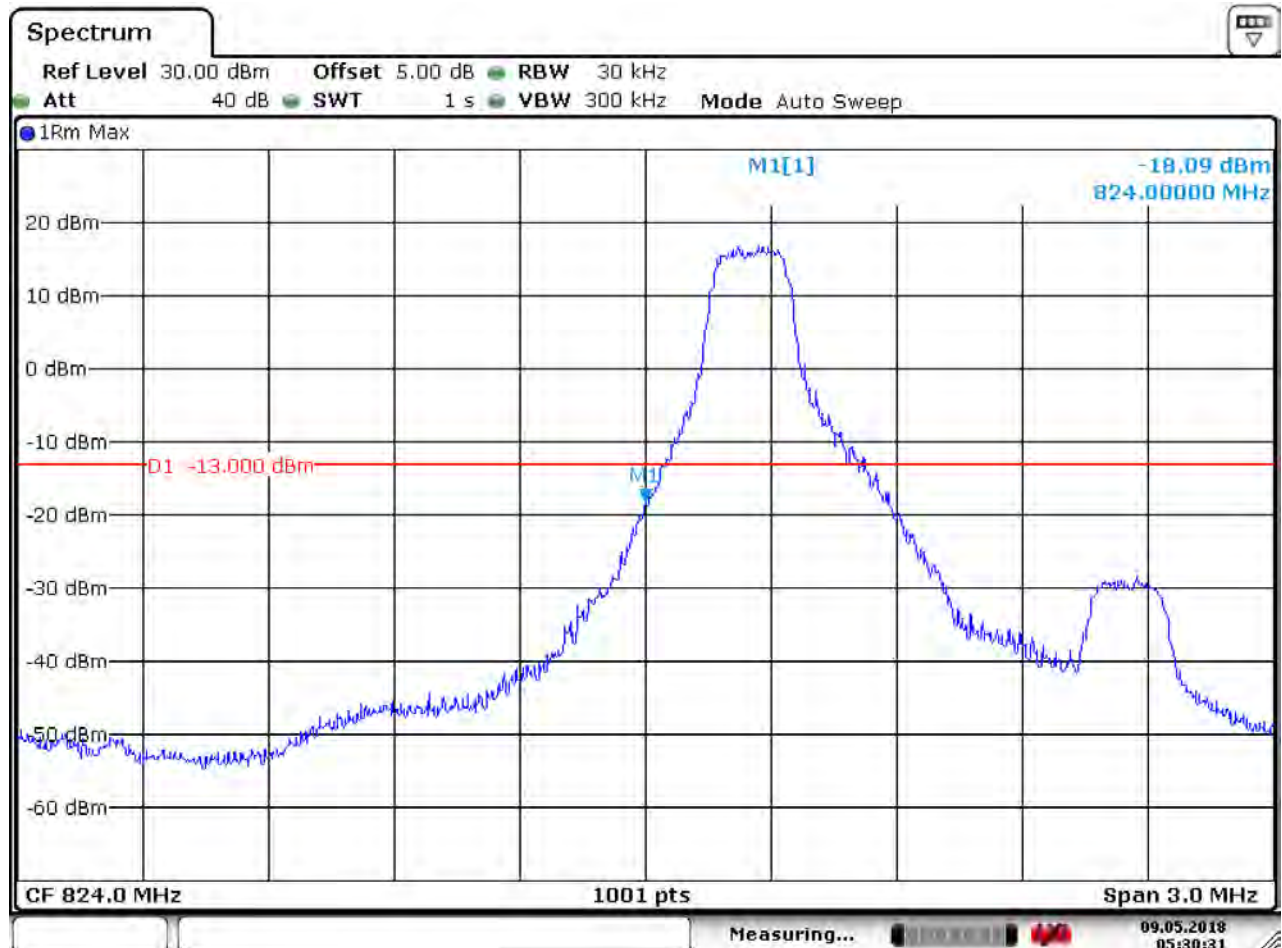
### 5.1 For LTE

#### 5.1.1 Test Band = LTE band5

##### 5.1.1.1 Test Mode = LTE/TM1 1.4MHz

##### 5.1.1.1.1 Test Channel = LCH

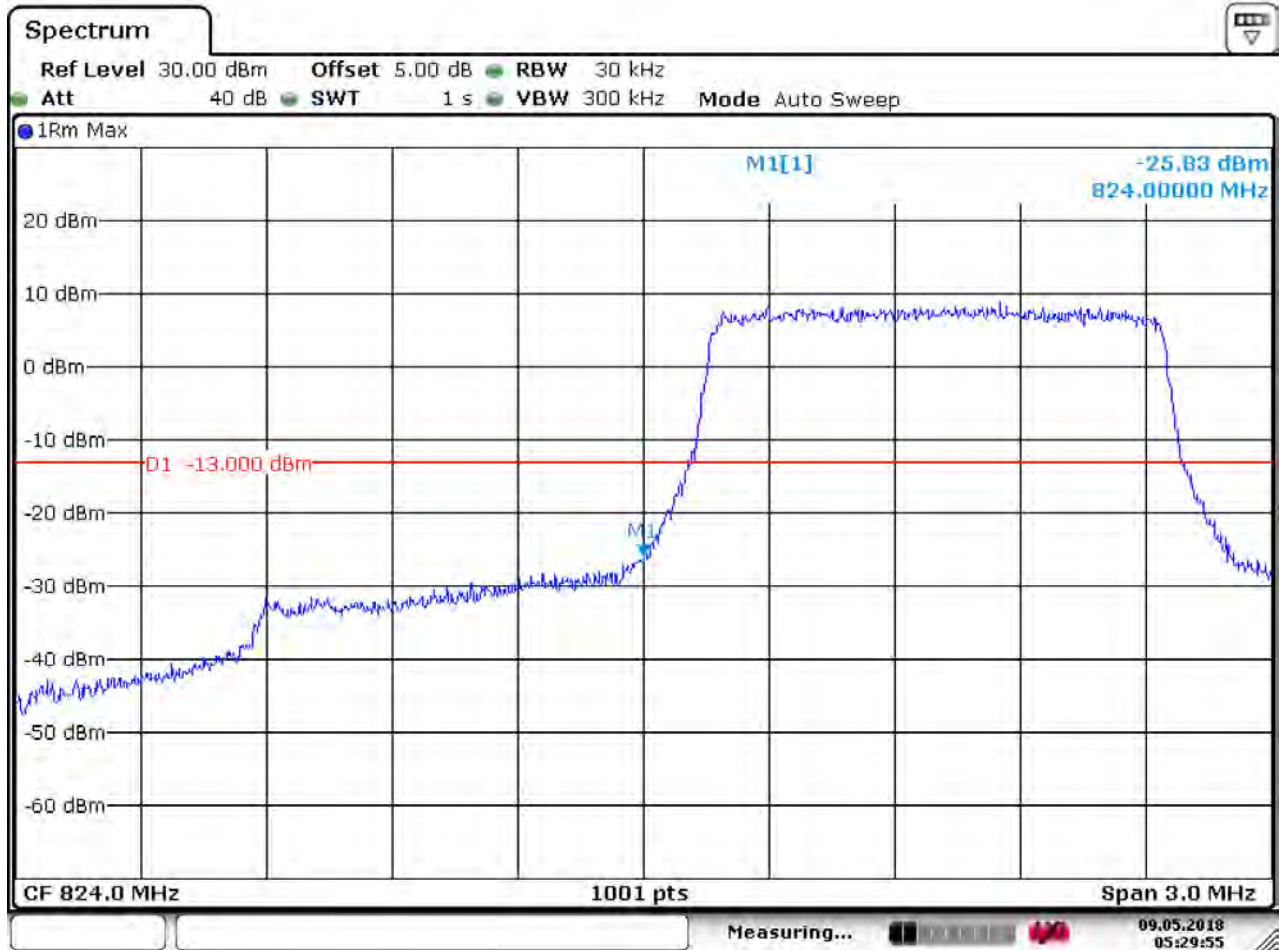
##### 5.1.1.1.1 Test RB=1RB



Date: 9.MAY.2018 05:30:32



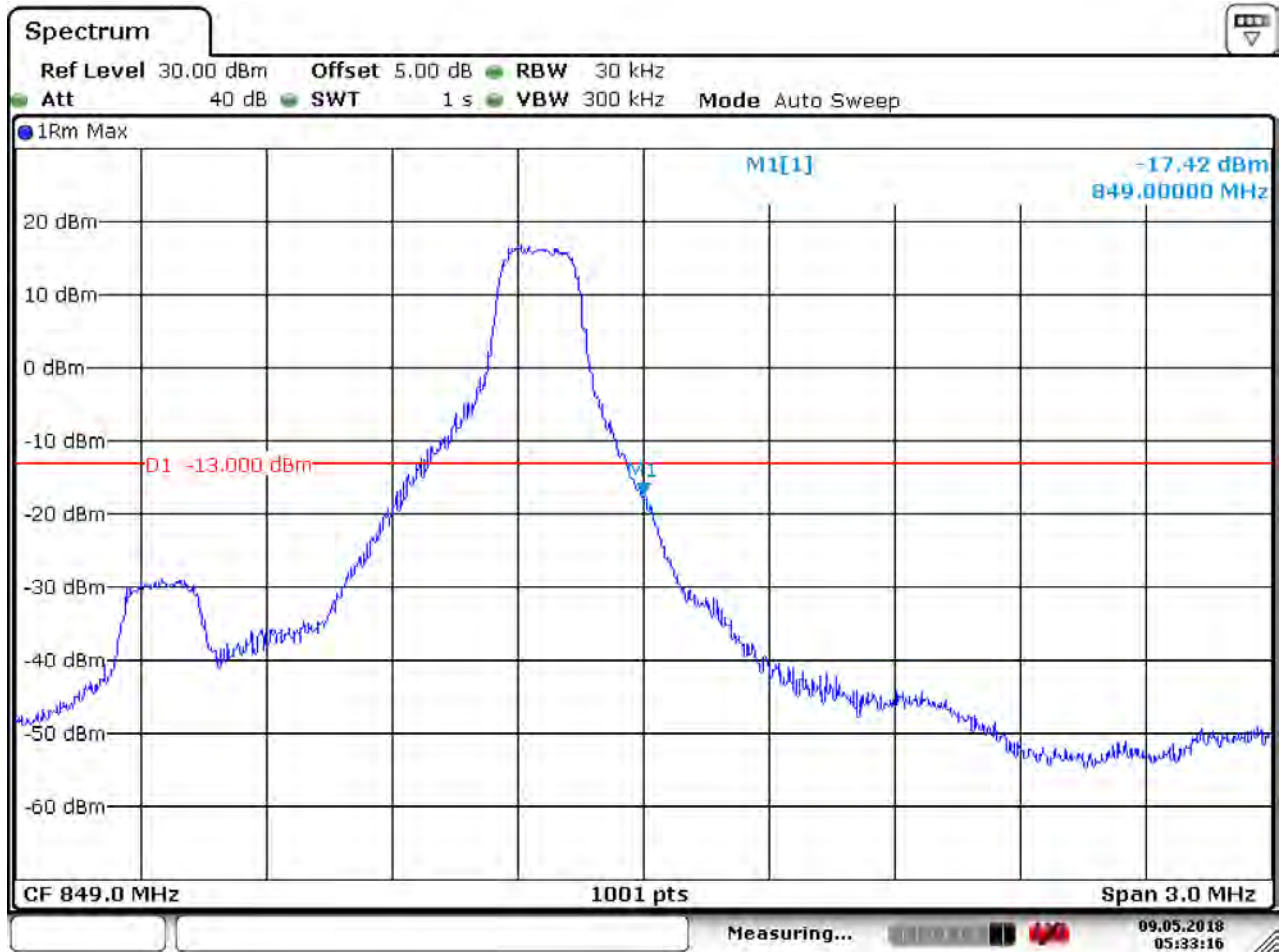
5.1.1.1.2 Test RB=6RB



Date: 9.MAY.2018 05:29:55

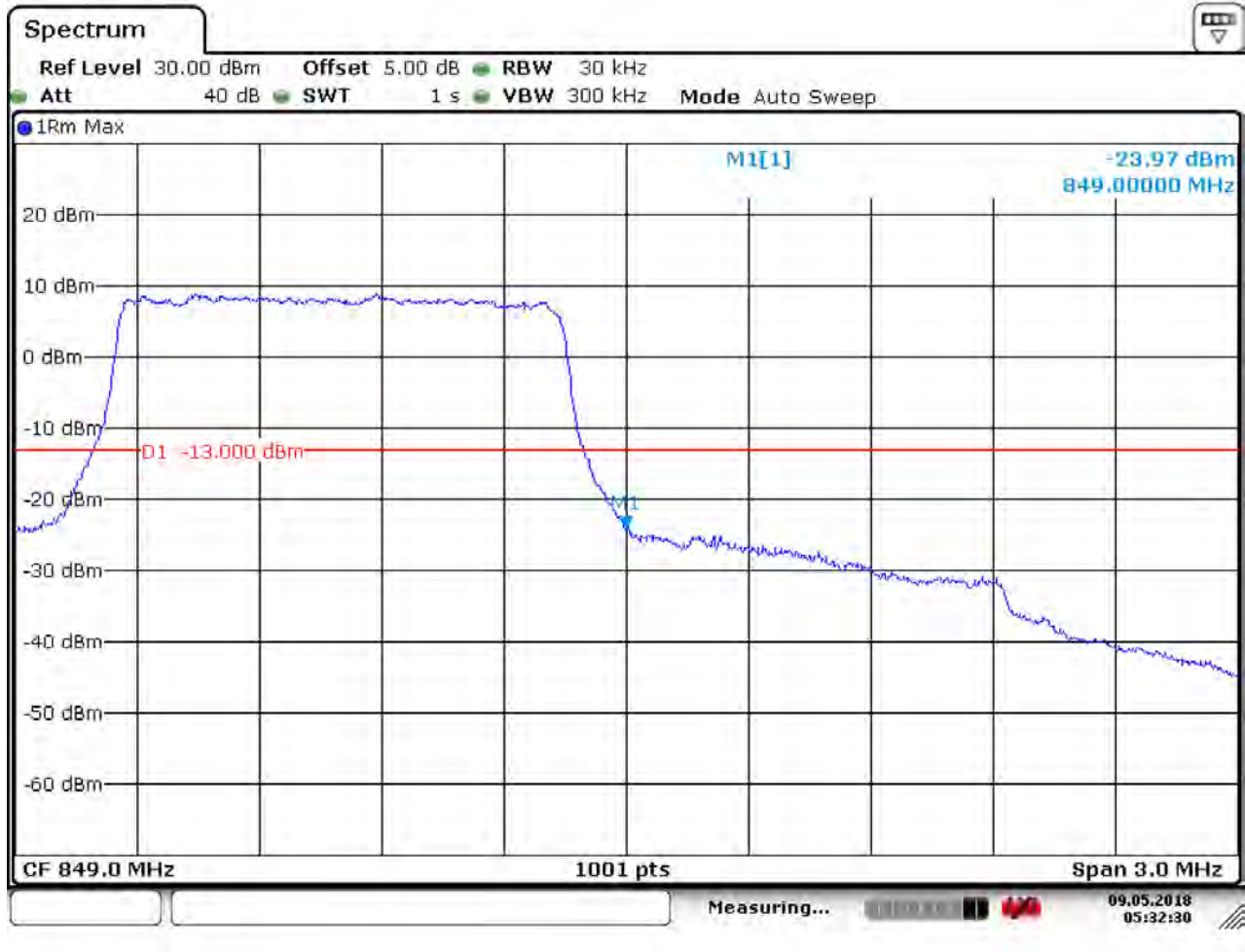
**5.1.1.1.2 Test Channel = HCH**

**5.1.1.1.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:33:17

**5.1.1.1.2.2 Test RB=6RB**



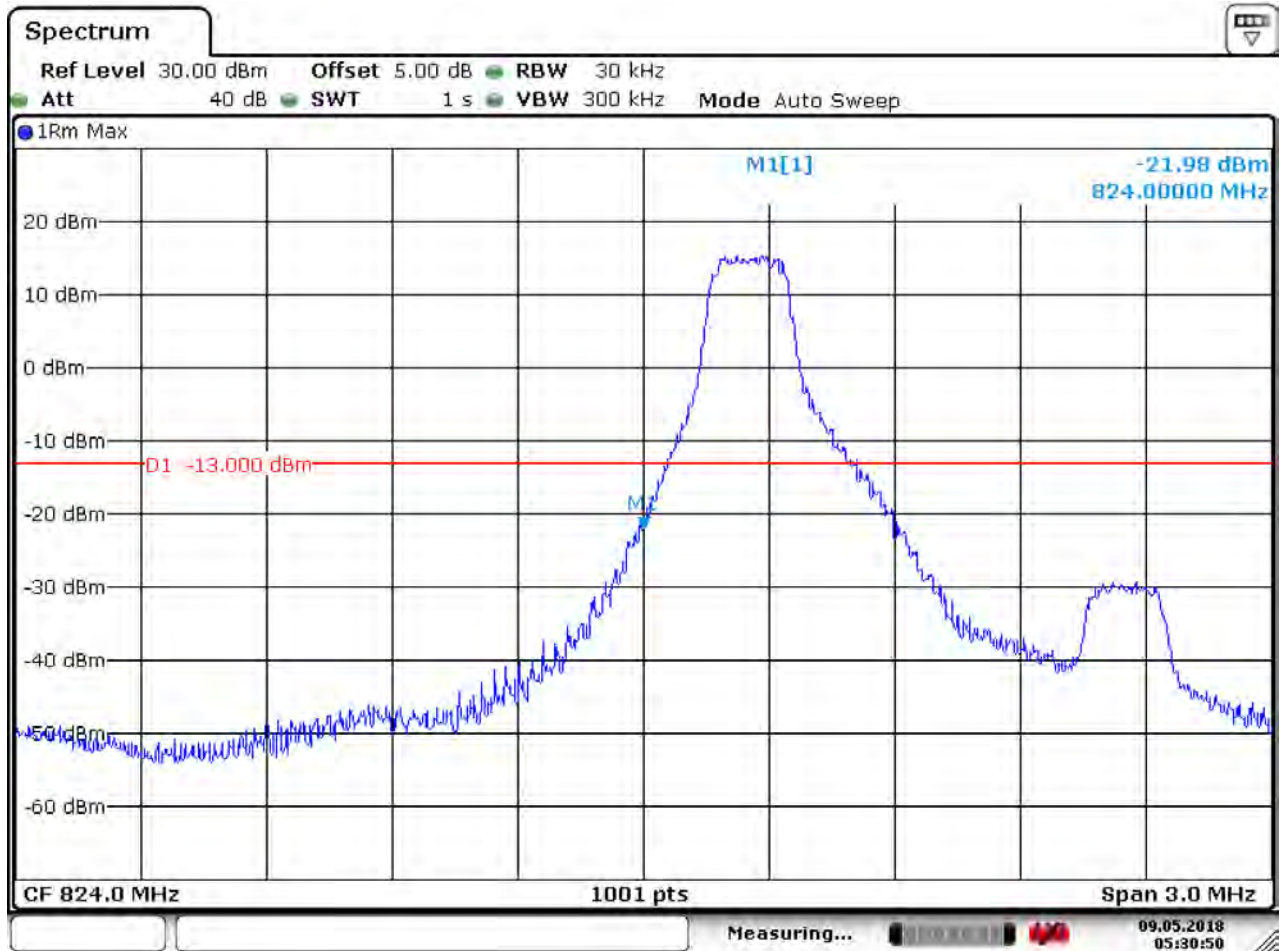
Date: 9.MAY.2018 05:32:30



5.1.1.2 Test Mode = LTE/TM2 1.4MHz

5.1.1.2.1 Test Channel = LCH

5.1.1.2.1.1 Test RB=1RB

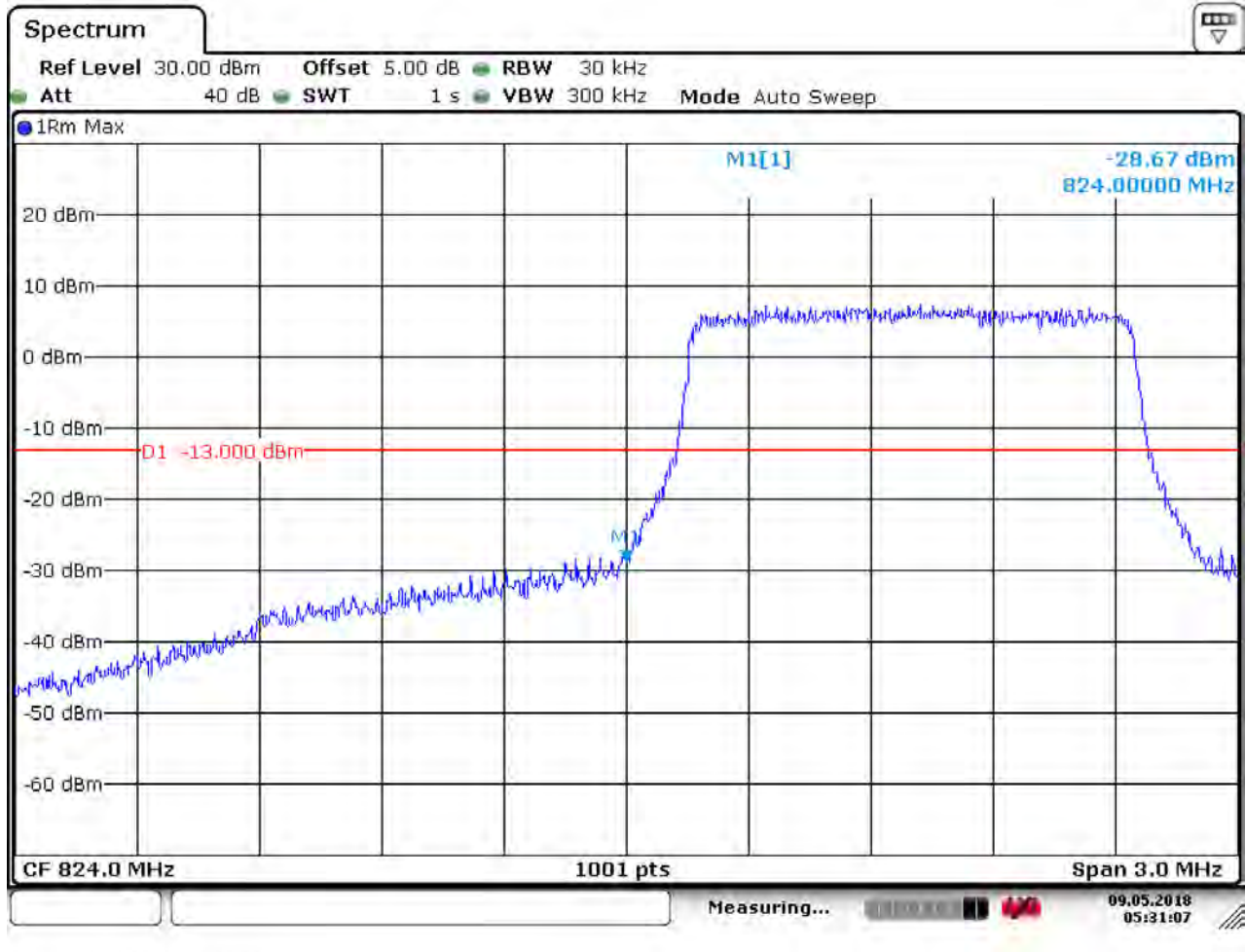


Date: 9.MAY.2018 05:30:51





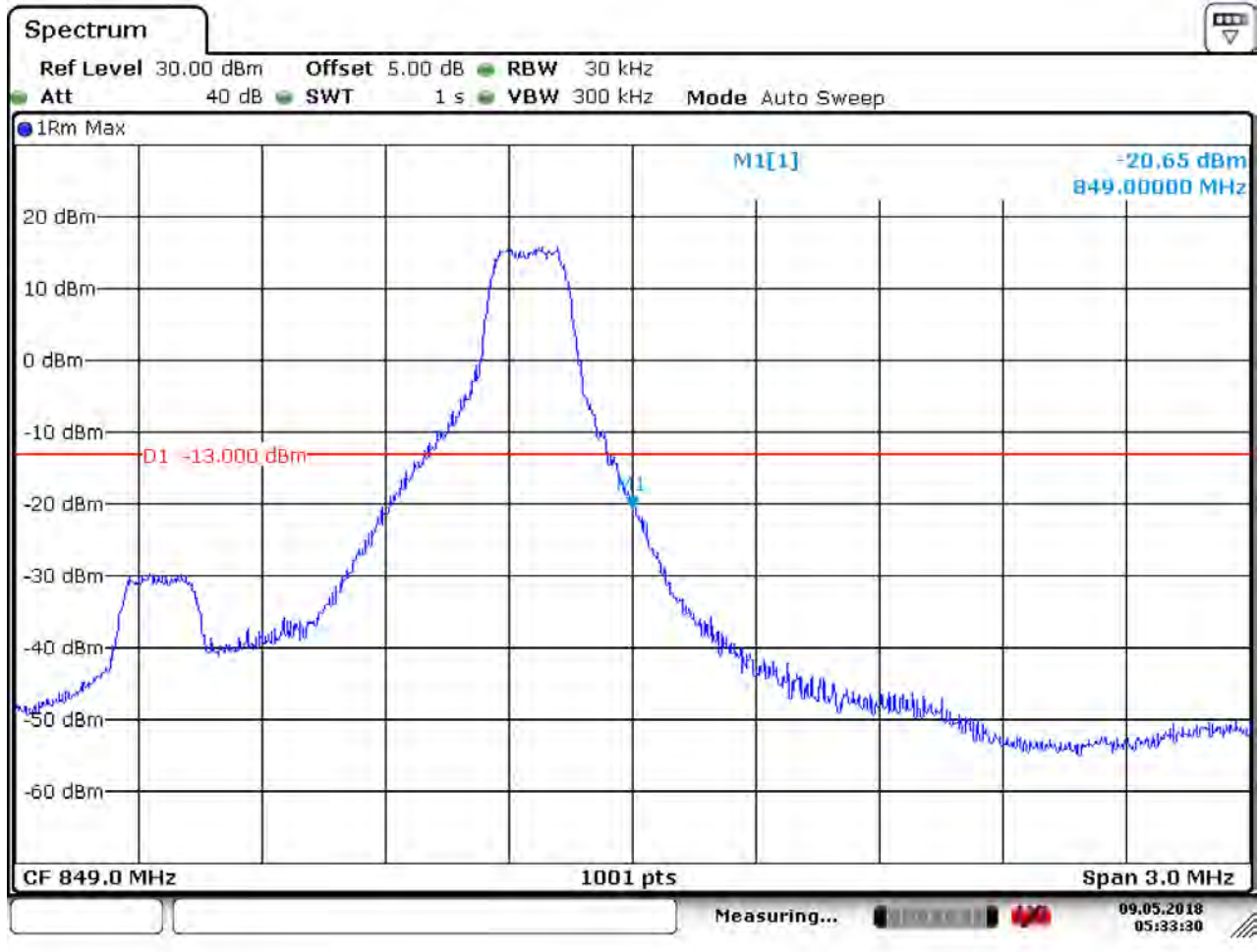
5.1.1.2.1.2 Test RB=6RB



Date: 9.MAY.2018 05:31:06

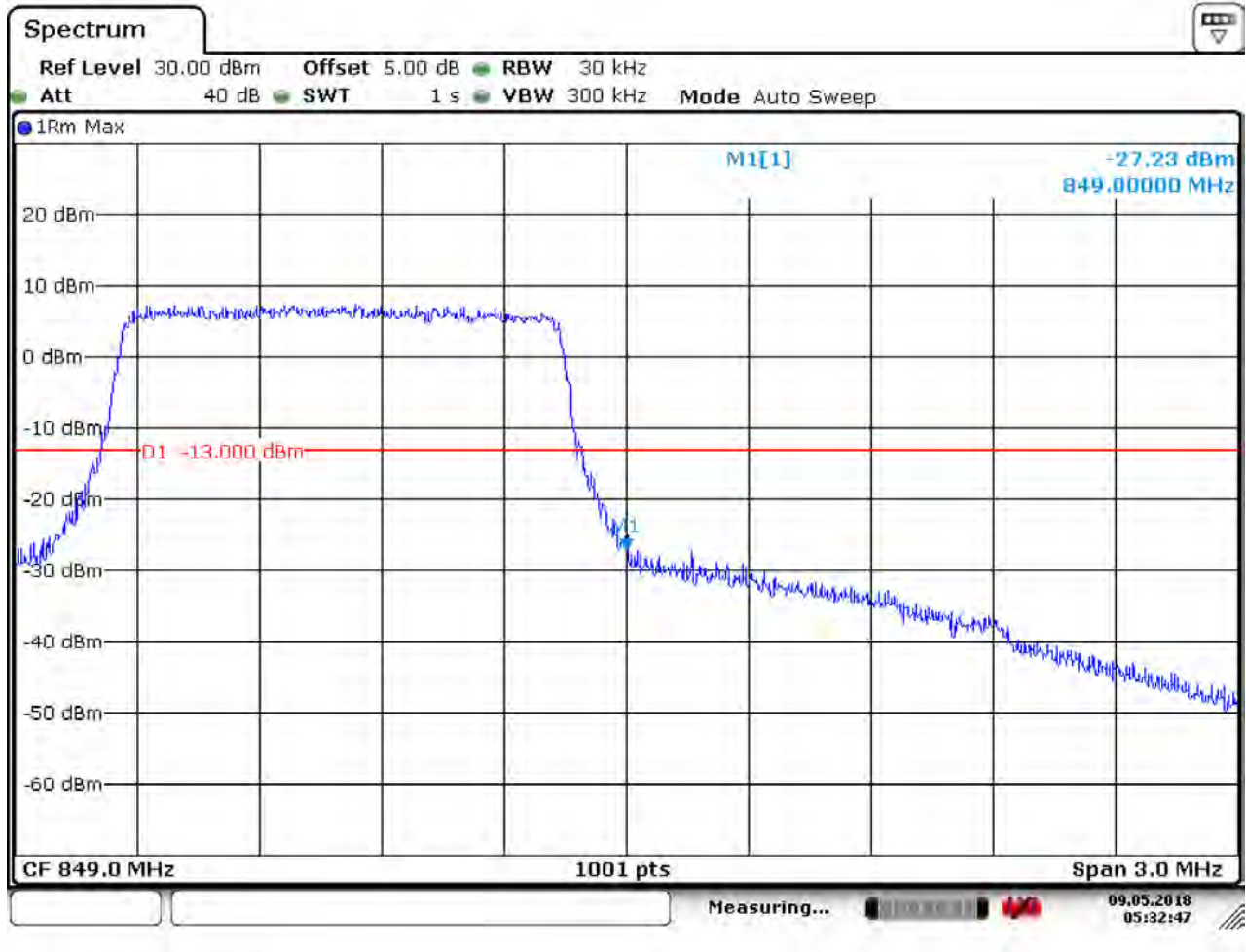
**5.1.1.2.2 Test Channel = HCH**

**5.1.1.2.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:33:30

5.1.1.2.2.2 Test RB=6RB

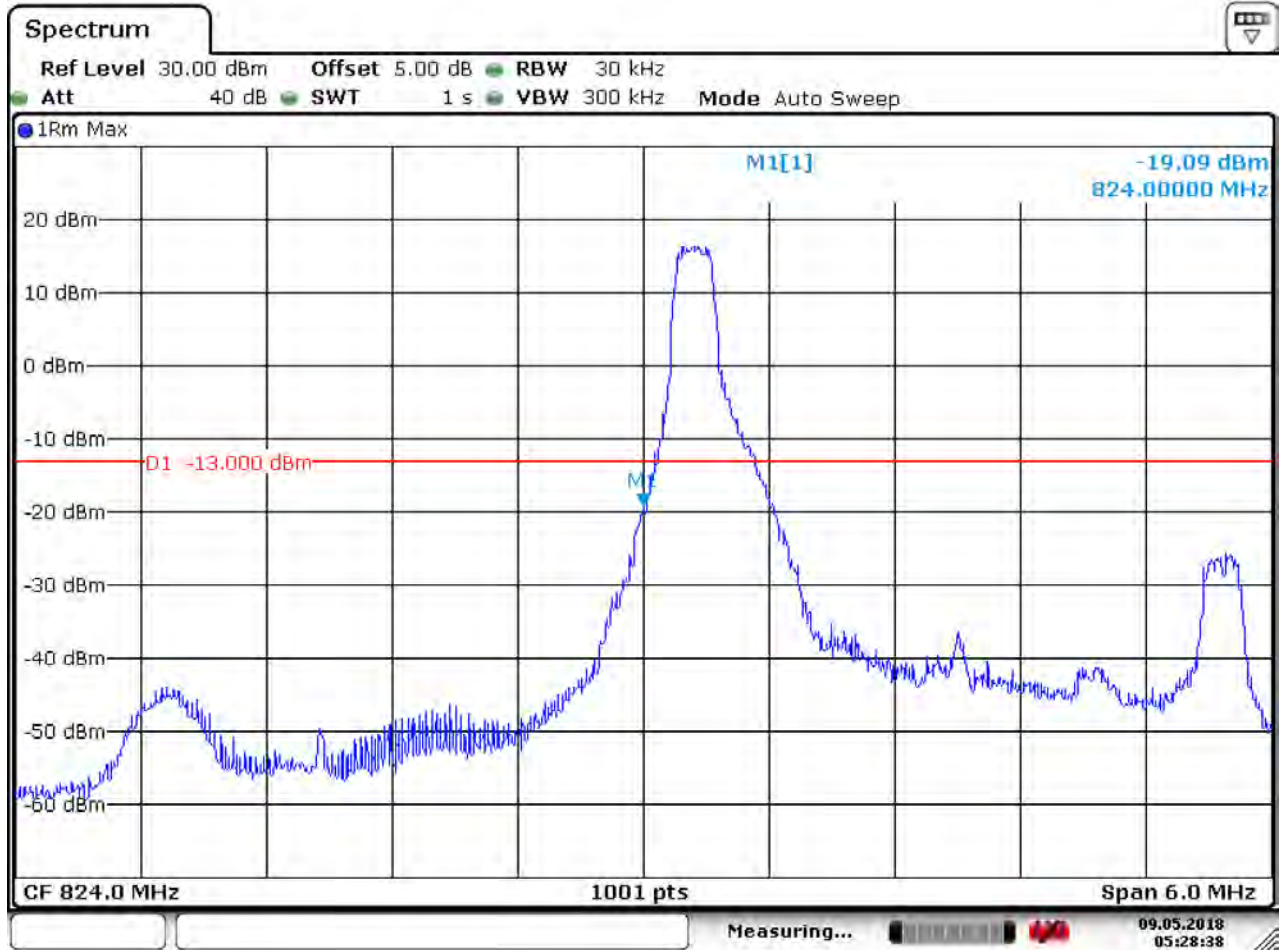


Date: 9.MAY.2018 05:32:47

**5.1.1.3 Test Mode = LTE/TM1 3MHz**

**5.1.1.3.1 Test Channel = LCH**

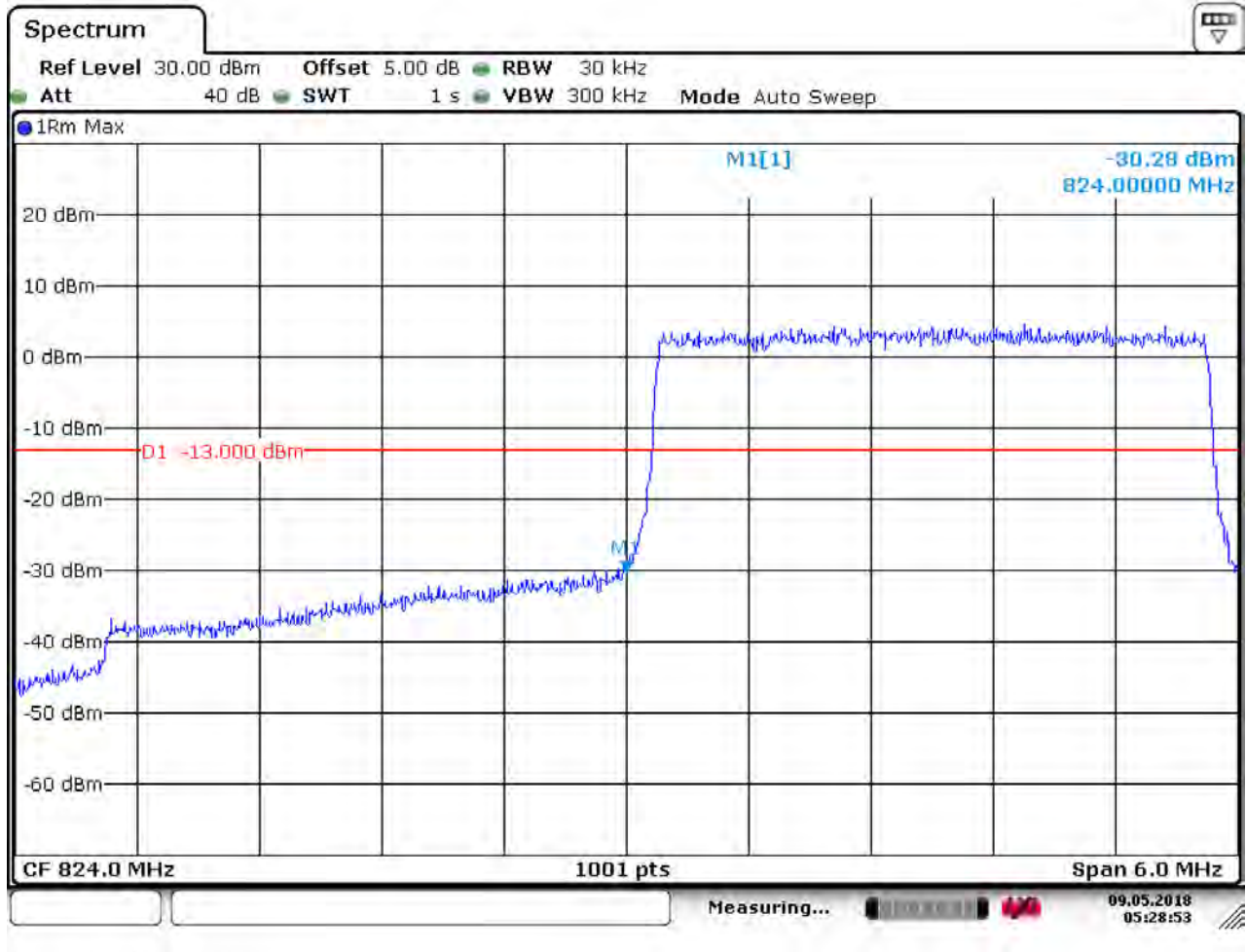
**5.1.1.3.1.1 Test RB=1RB**



Date: 9.MAY.2018 05:28:38



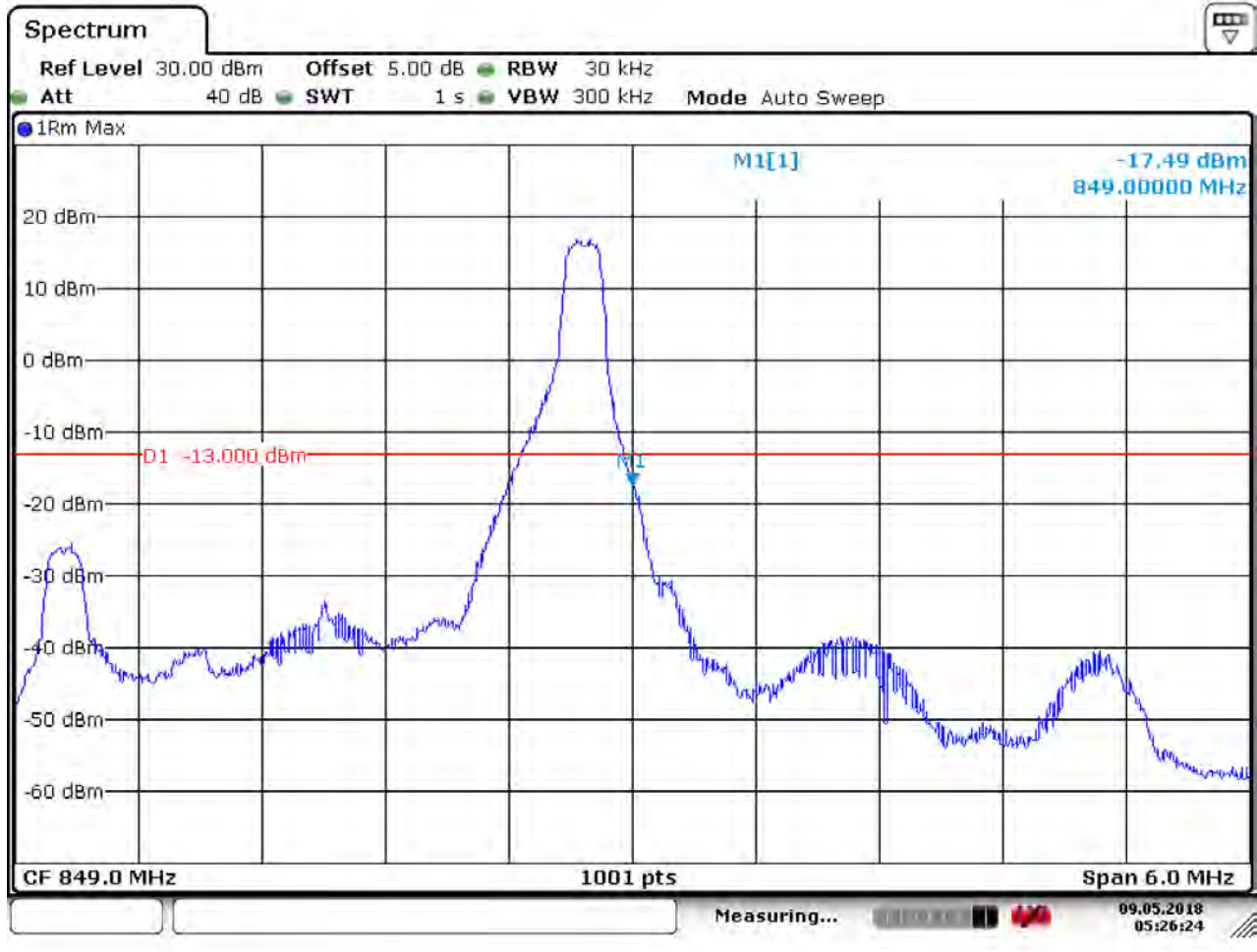
5.1.1.3.1.2 Test RB=15RB



Date: 9.MAY.2018 05:28:53

**5.1.1.3.2 Test Channel = HCH**

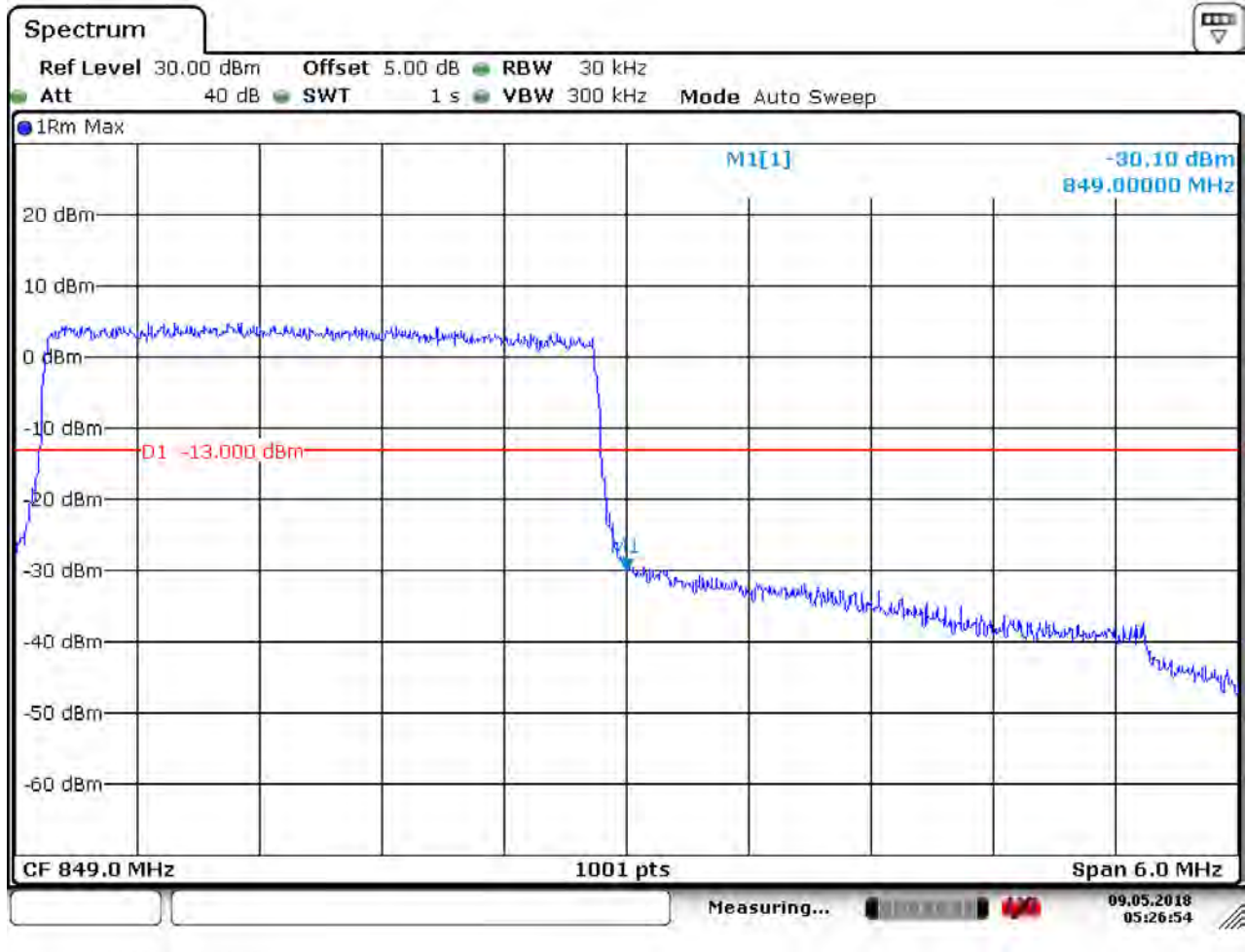
**5.1.1.3.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:26:24



5.1.1.3.2.2 Test RB=15RB

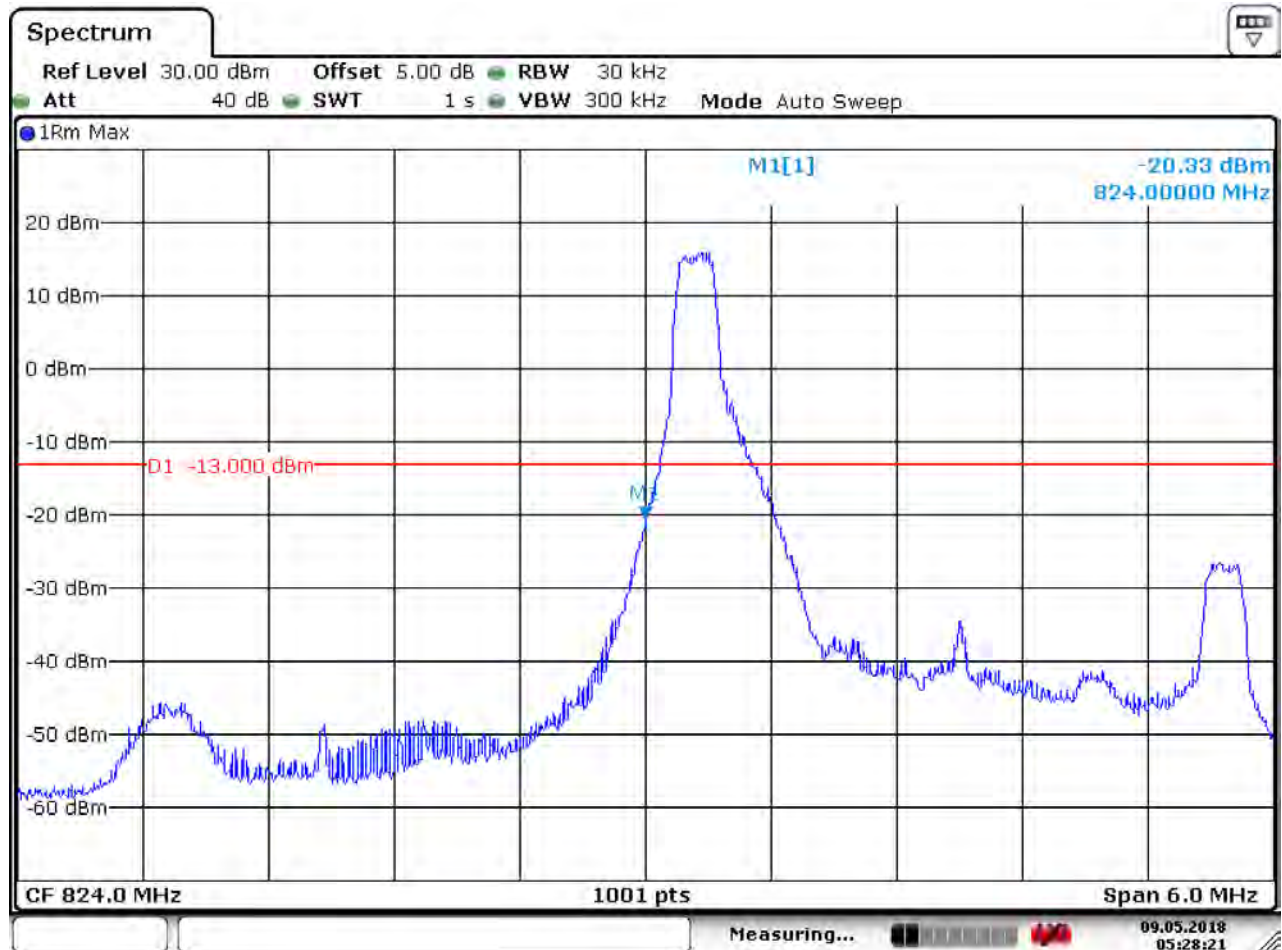


Date: 9.MAY.2018 05:26:55

5.1.1.4 Test Mode = LTE/TM2 3MHz

5.1.1.4.1 Test Channel = LCH

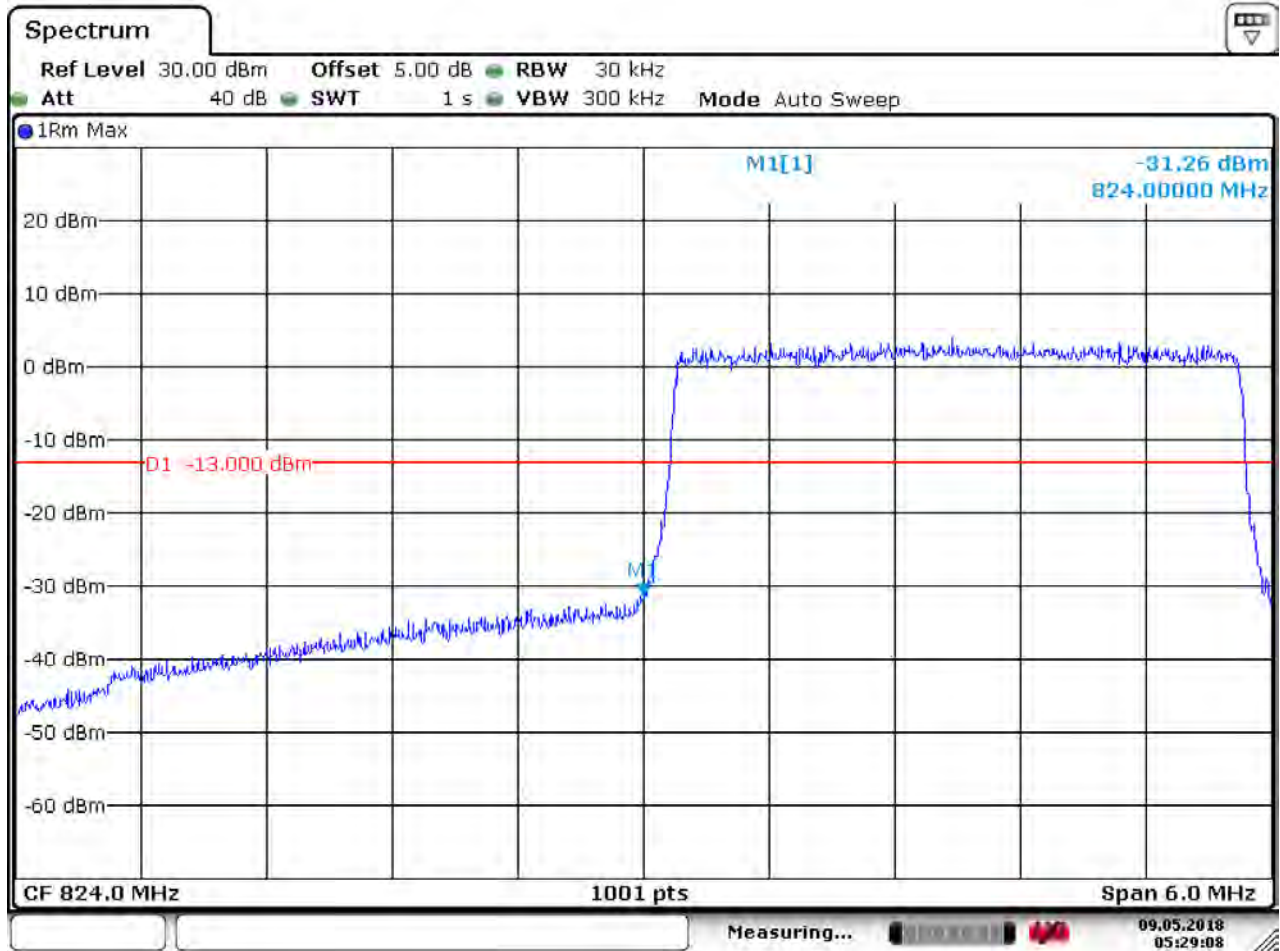
5.1.1.4.1.1 Test RB=1RB



Date: 9.MAY.2018 05:28:22



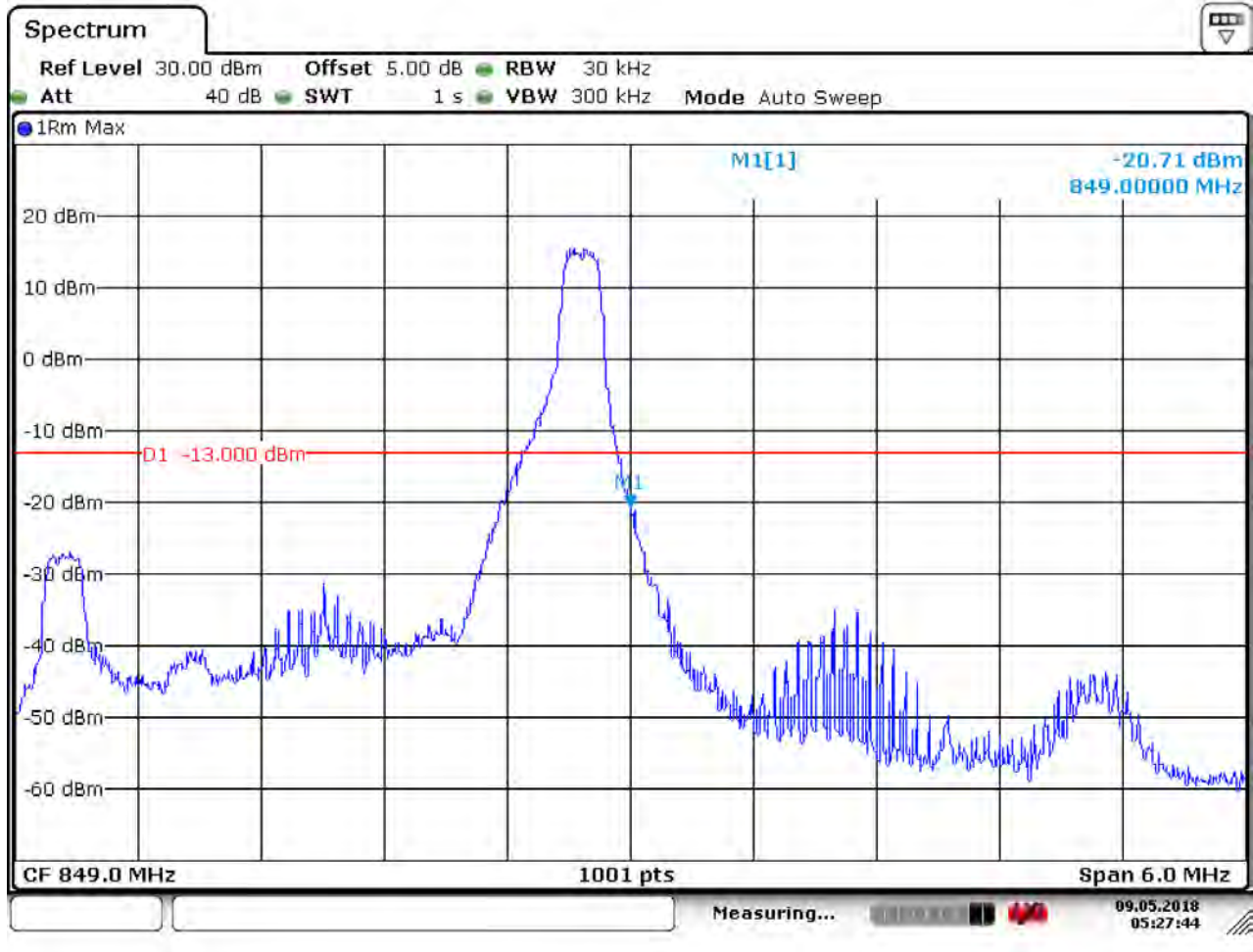
5.1.1.4.1.2 Test RB=15RB



Date: 9.MAY.2018 05:29:08

**5.1.1.4.2 Test Channel = HCH**

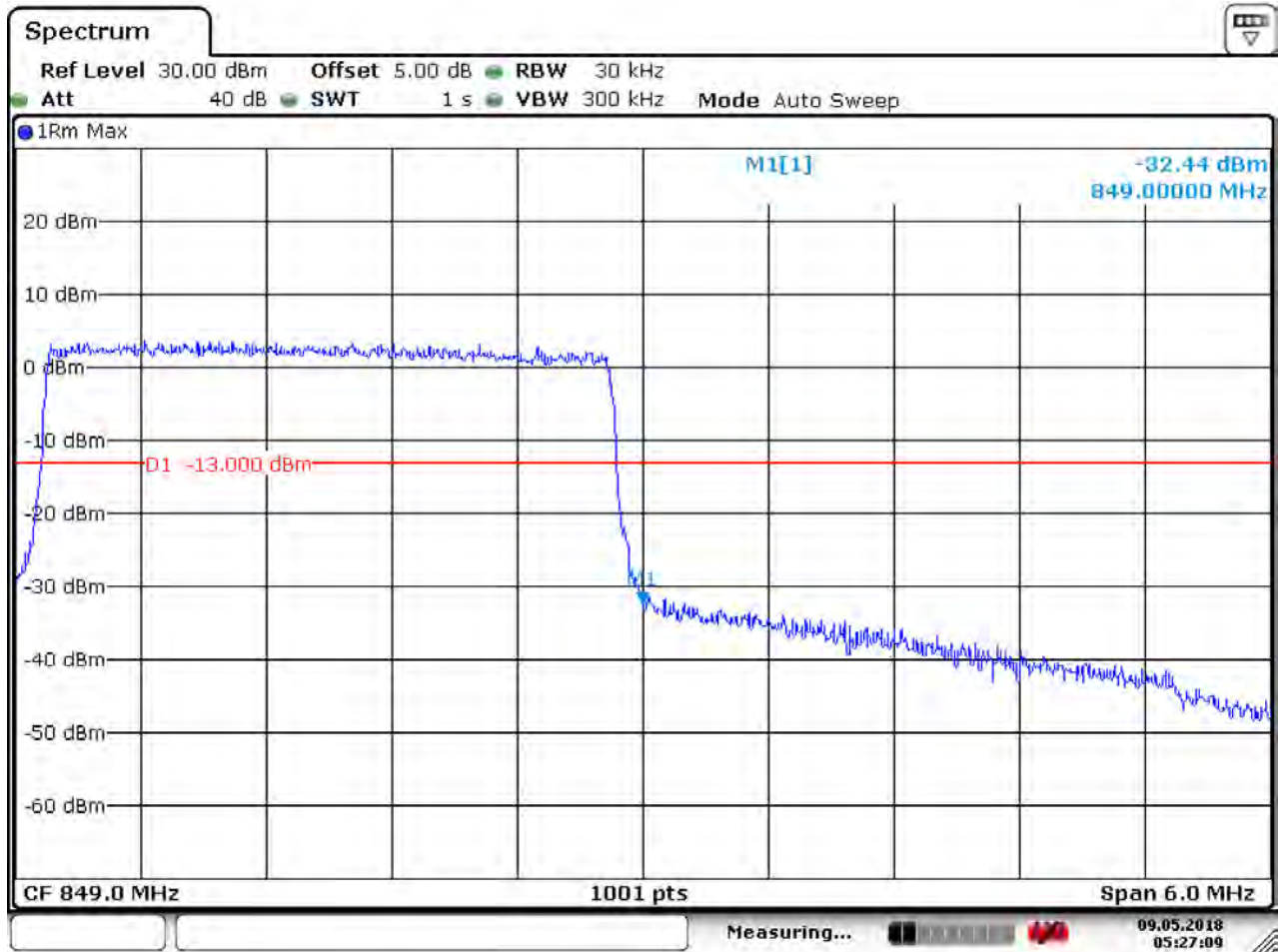
**5.1.1.4.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:27:44



5.1.1.4.3 Test RB=15RB

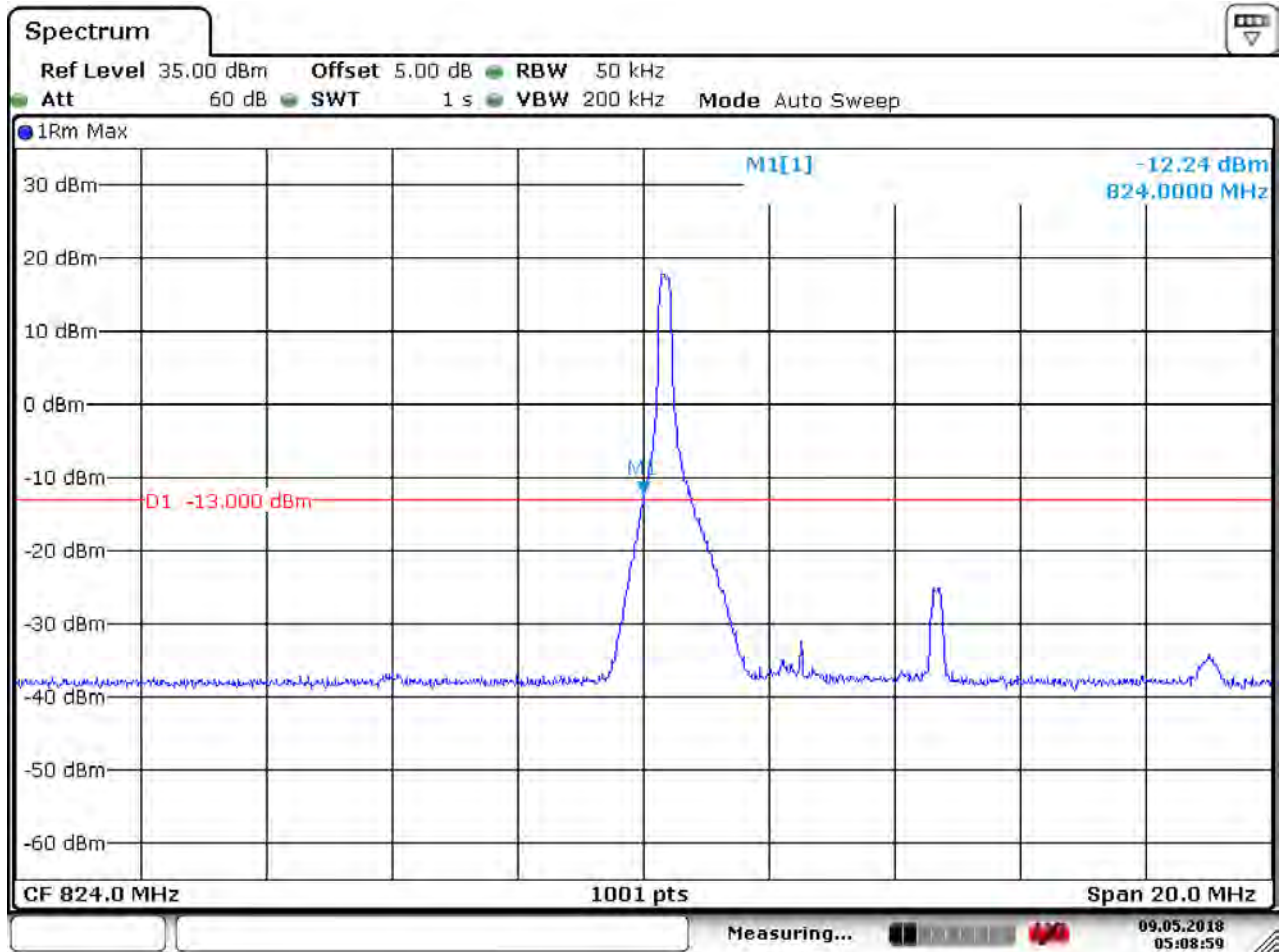


Date: 9.MAY.2018 05:27:09

**5.1.1.5 Test Mode = LTE/TM1 5MHz**

**5.1.1.5.1 Test Channel = LCH**

**5.1.1.5.1.1 Test RB=1RB**



Date: 9.MAY.2018 05:09:00



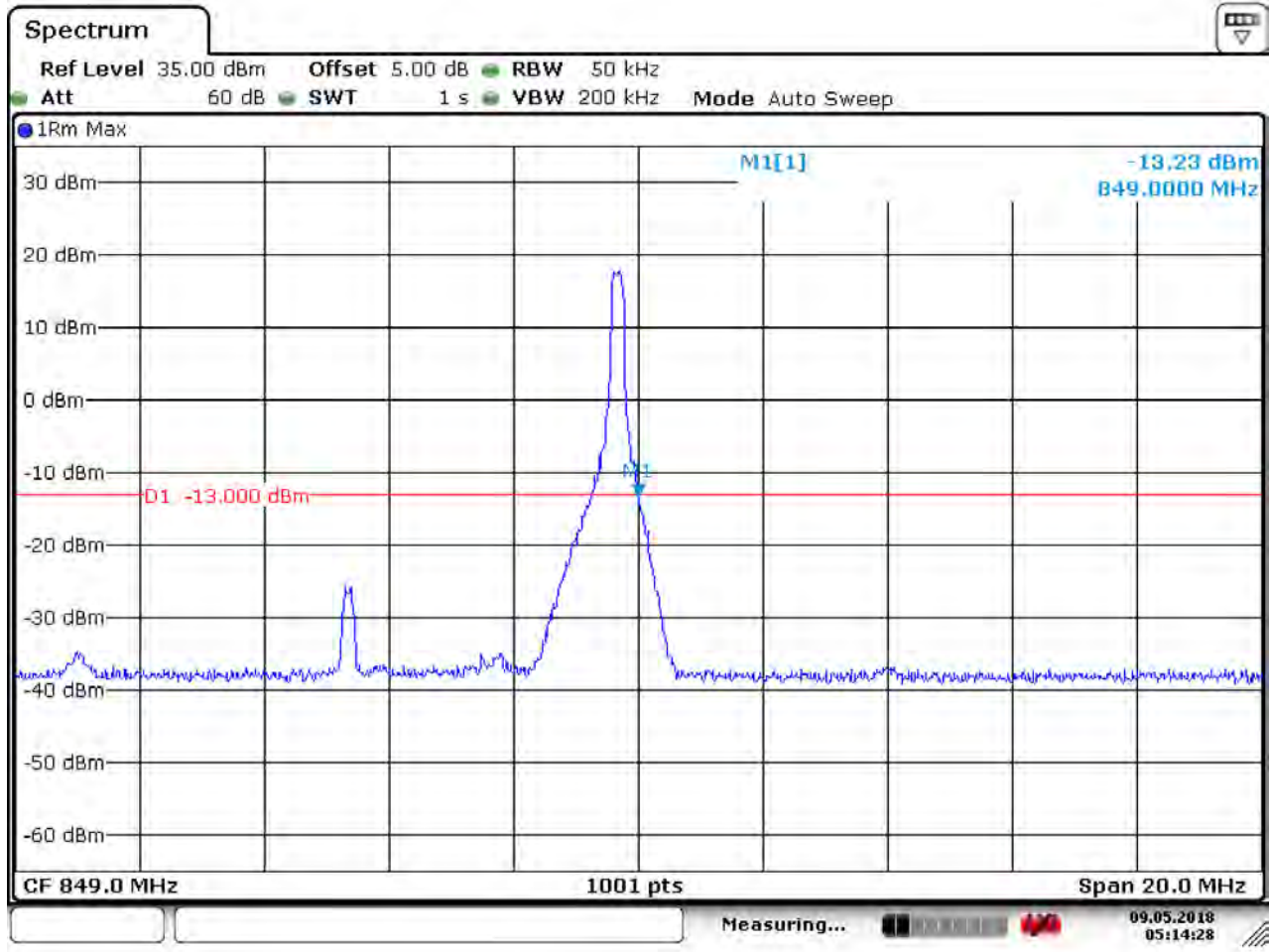
5.1.1.5.1.2 Test RB=25RB



Date: 9.MAY.2018 05:11:07

**5.1.1.5.2 Test Channel = HCH**

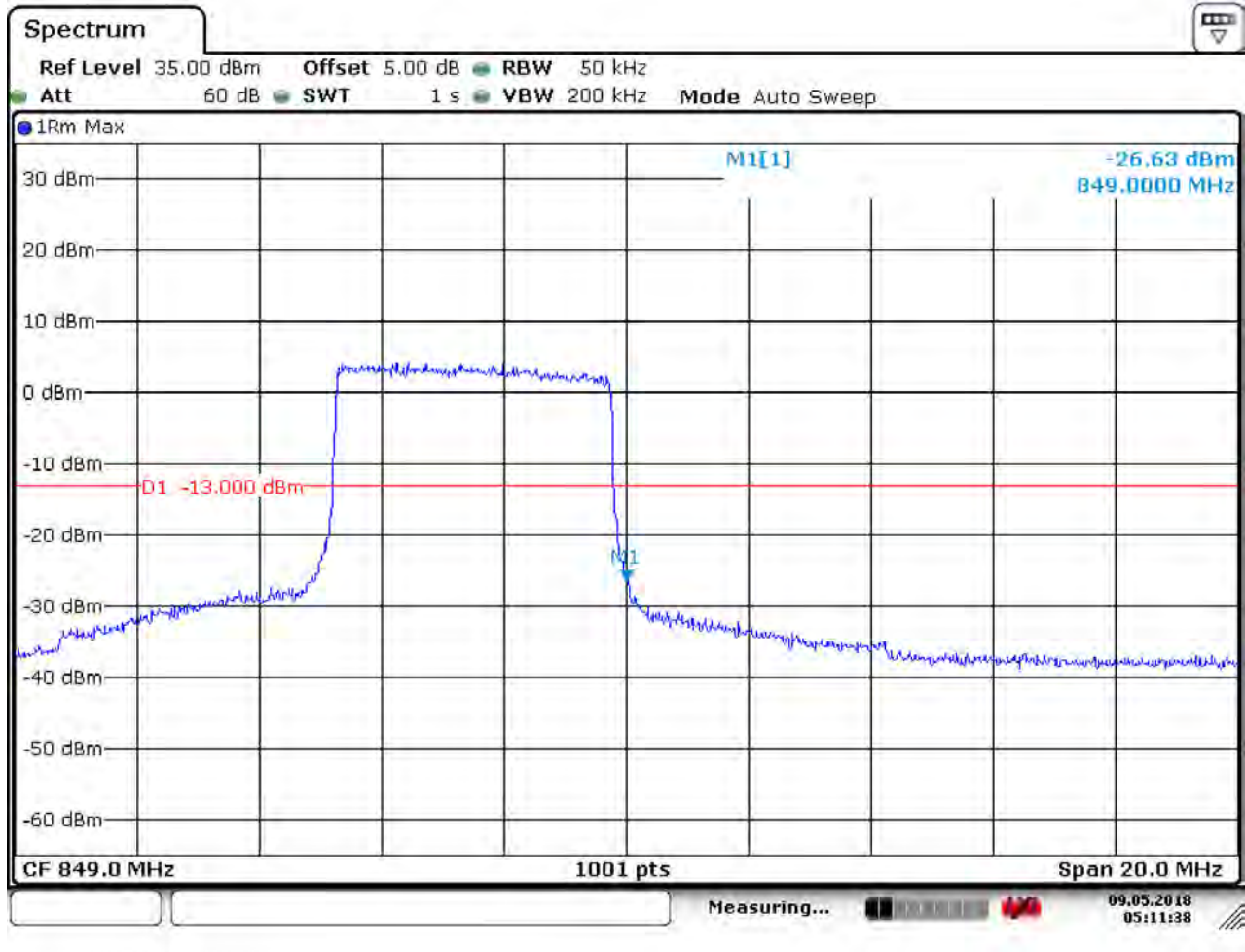
**5.1.1.5.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:14:28



5.1.1.5.2.2 Test RB=25RB

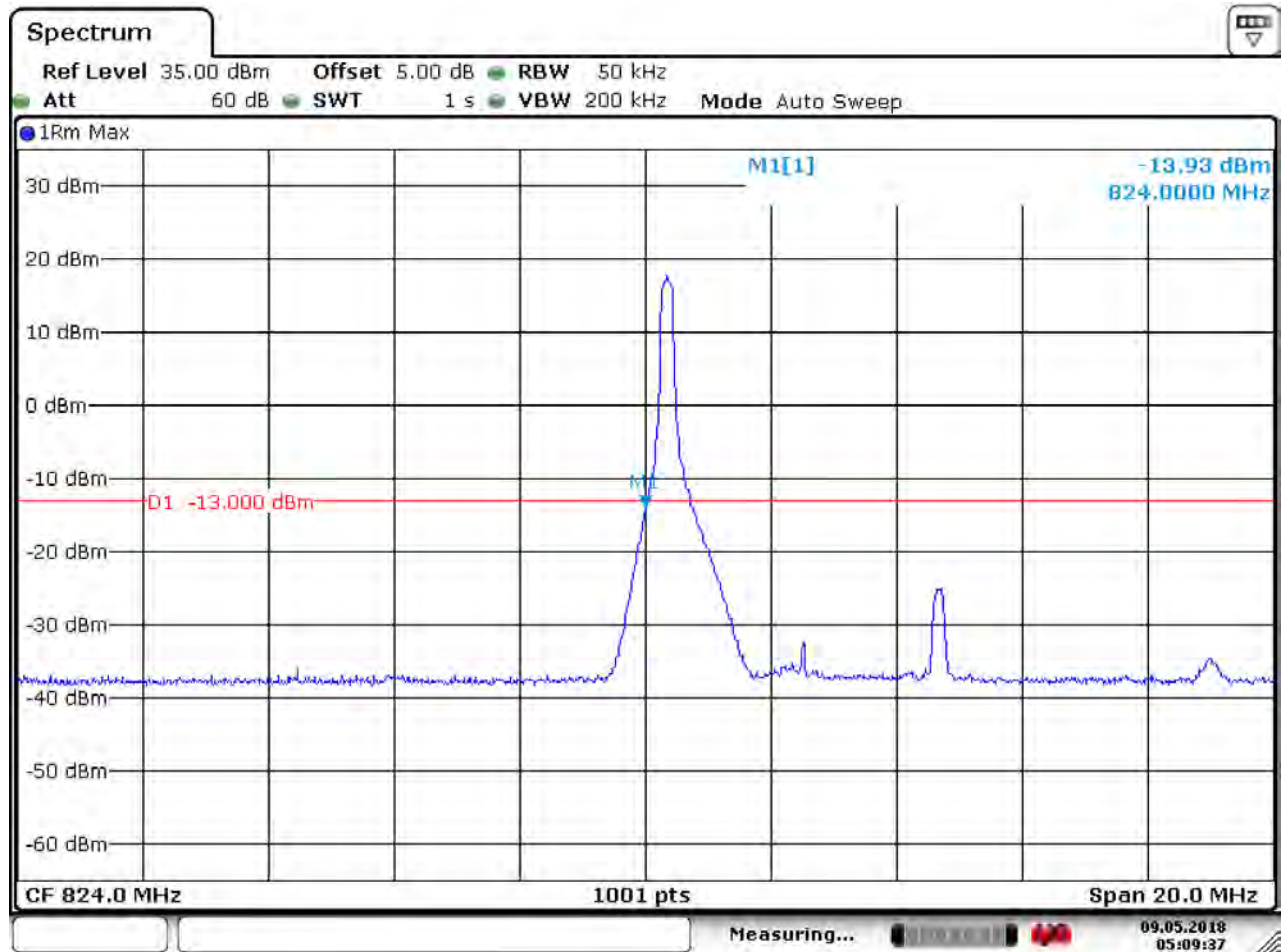


Date: 9.MAY.2018 05:11:39

**5.1.1.6 Test Mode = LTE/TM2 5MHz**

**5.1.1.6.1 Test Channel = LCH**

**5.1.1.6.1.1 Test RB=1RB**

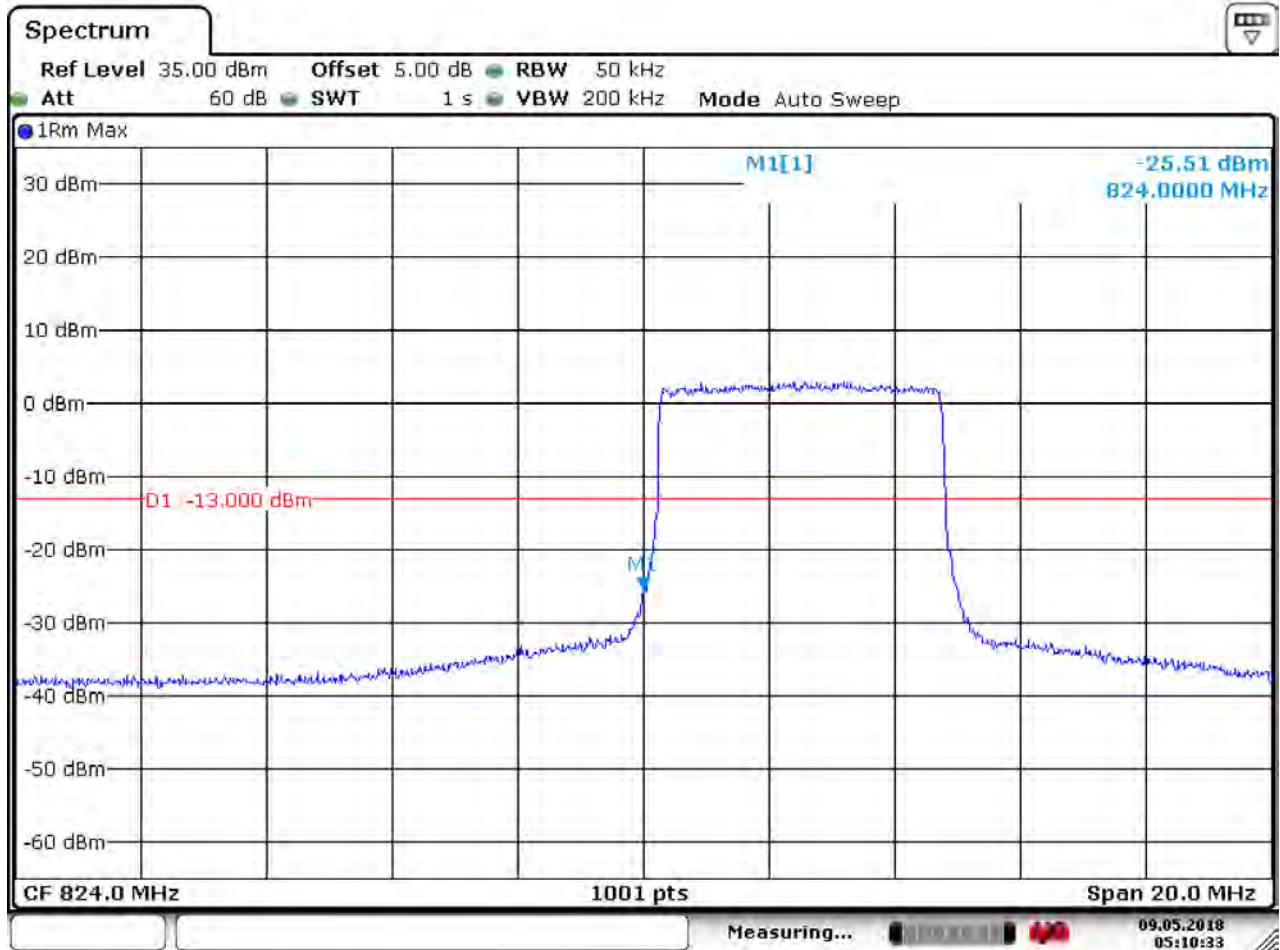


Date: 9.MAY.2018 05:09:37





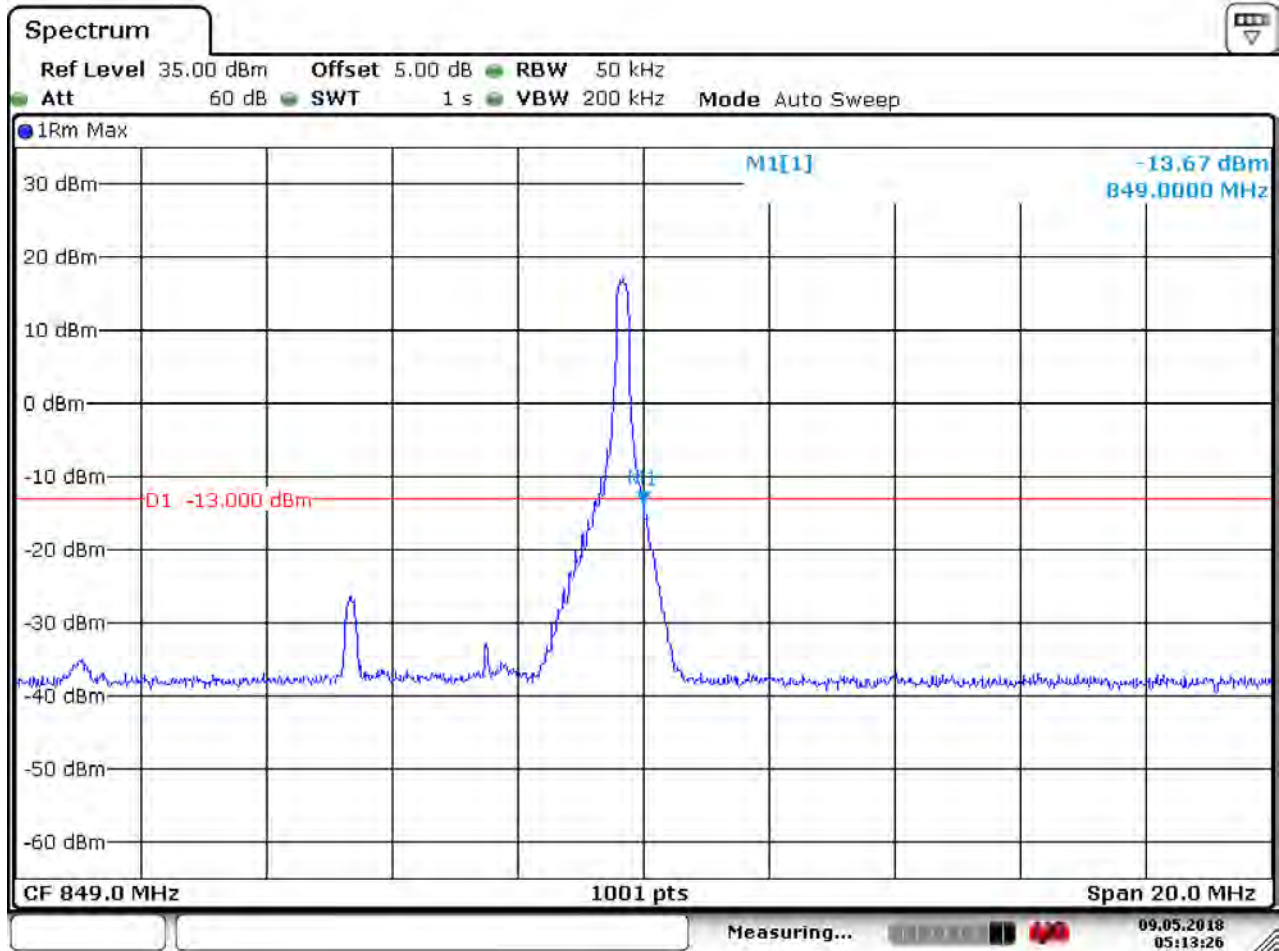
5.1.1.6.1.2 Test RB=25RB



Date: 9.MAY.2018 05:10:33

**5.1.1.6.2 Test Channel = HCH**

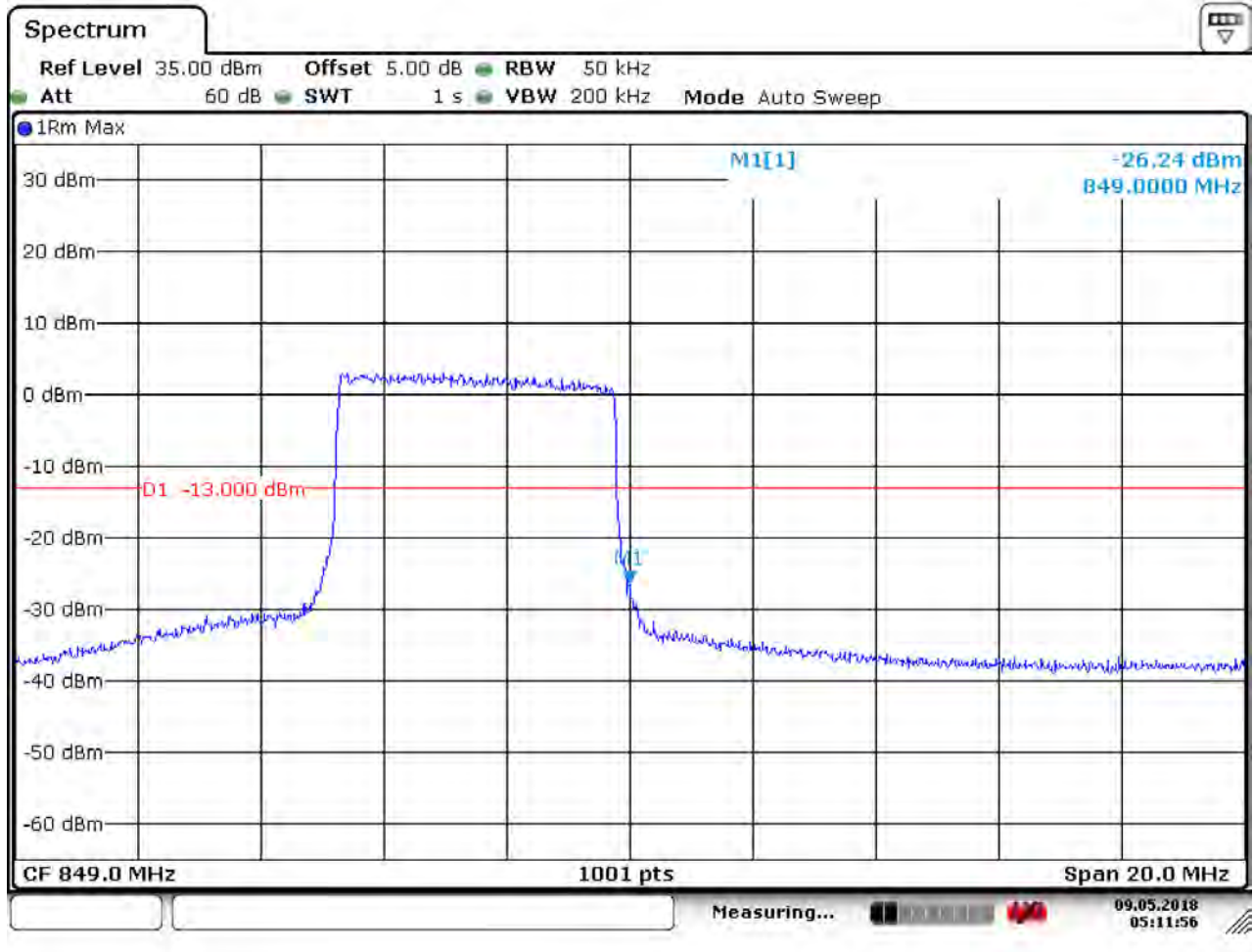
**5.1.1.6.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:13:26



5.1.1.6.2.2 Test RB=25RB

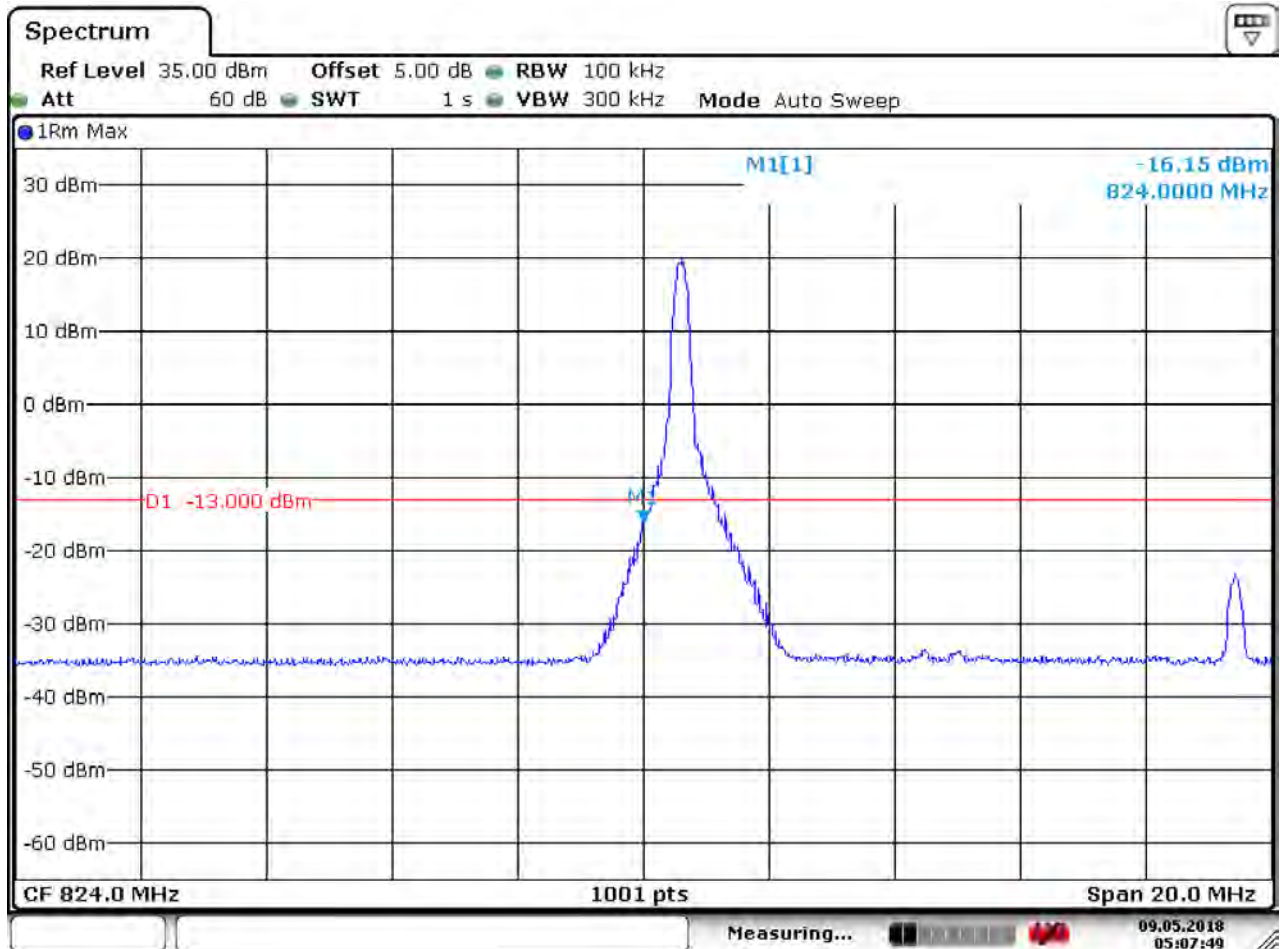


Date: 9.MAY.2018 05:11:56

**5.1.1.7 Test Mode = LTE/TM1 10MHz**

**5.1.1.7.1 Test Channel = LCH**

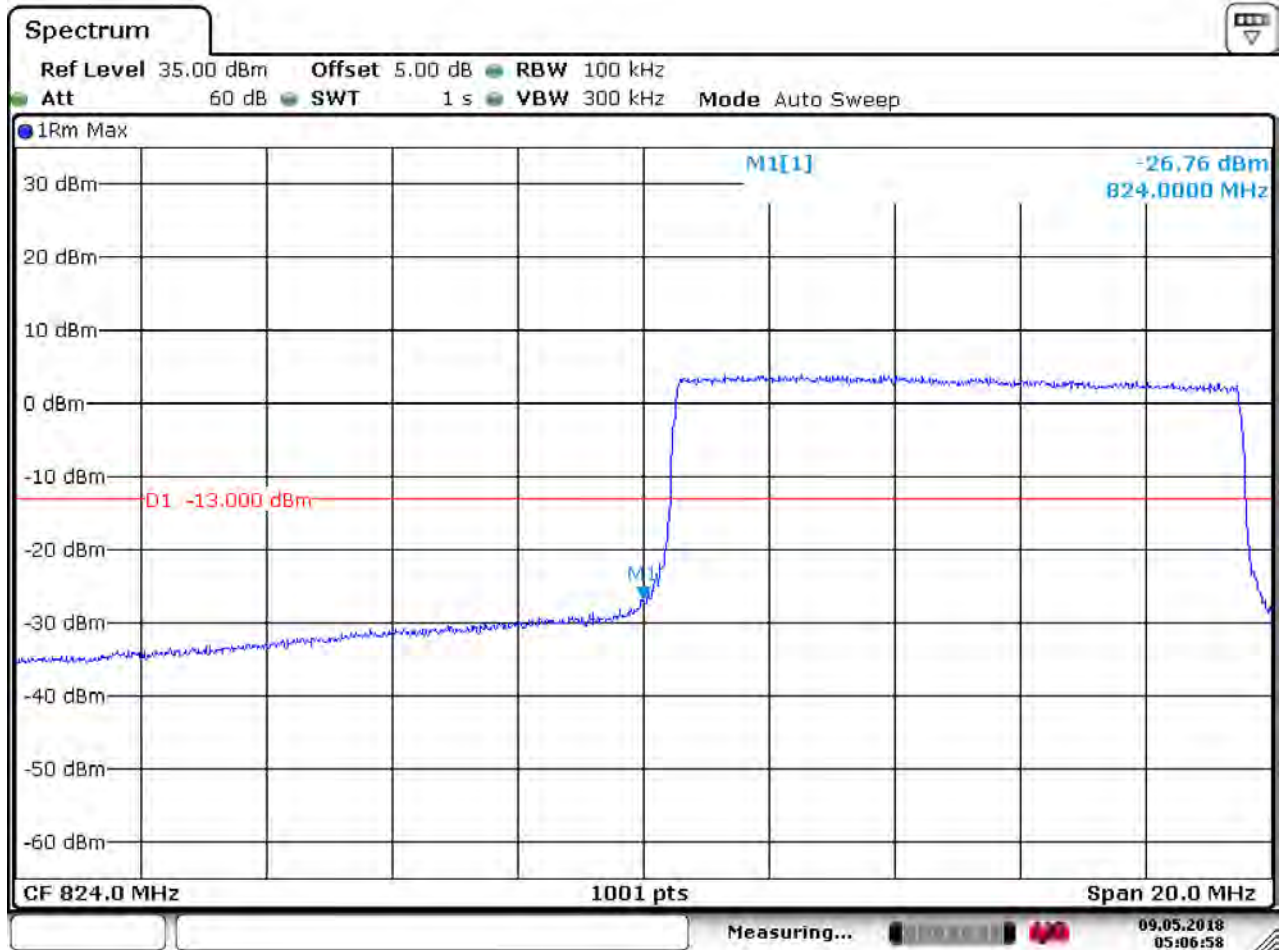
**5.1.1.7.1.1 Test RB=1RB**



Date: 9.MAY.2018 05:07:49



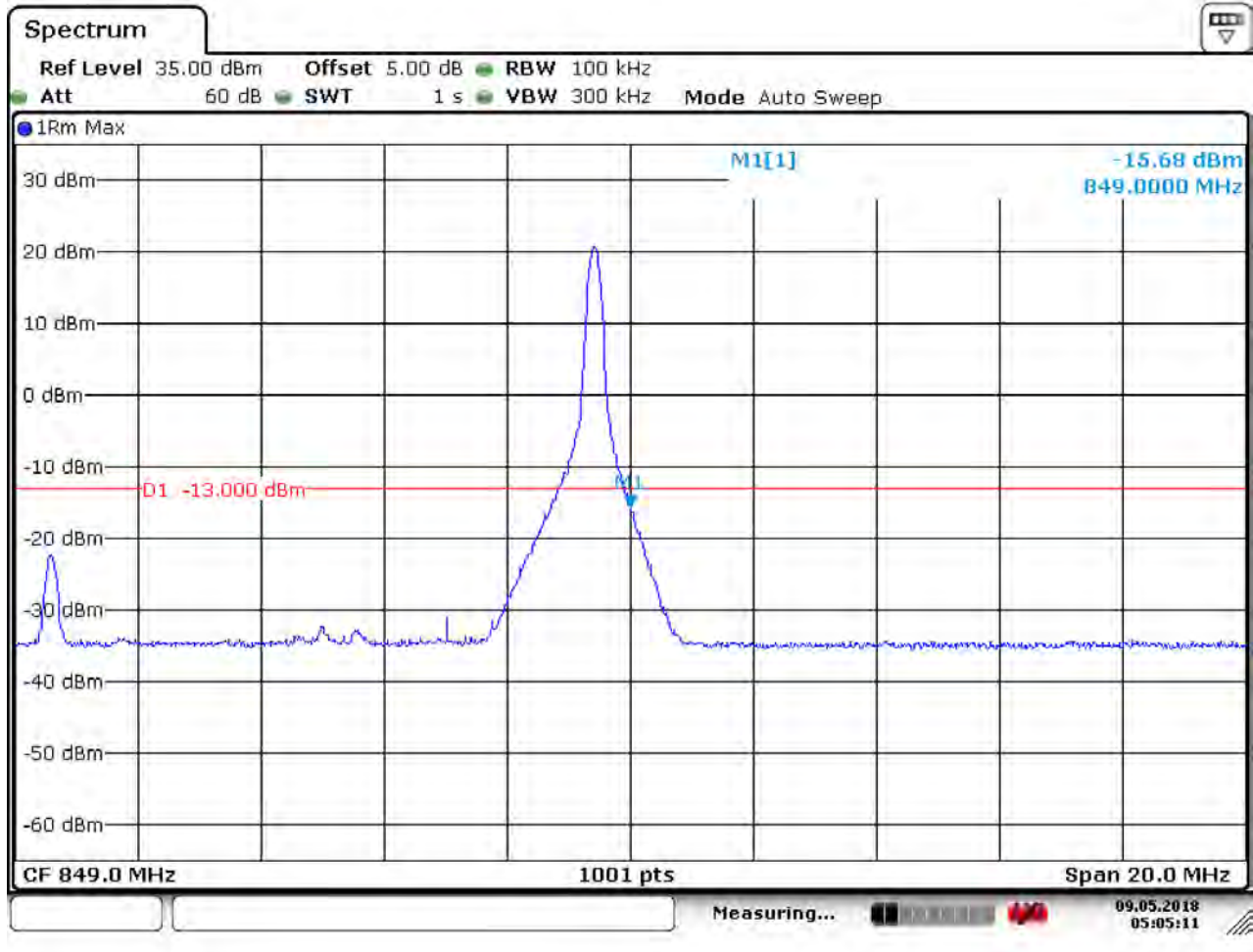
5.1.1.7.1.2 Test RB=50RB



Date: 9.MAY.2018 05:06:58

**5.1.1.7.2 Test Channel = HCH**

**5.1.1.7.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:05:11

5.1.1.7.2.2 Test RB=50RB



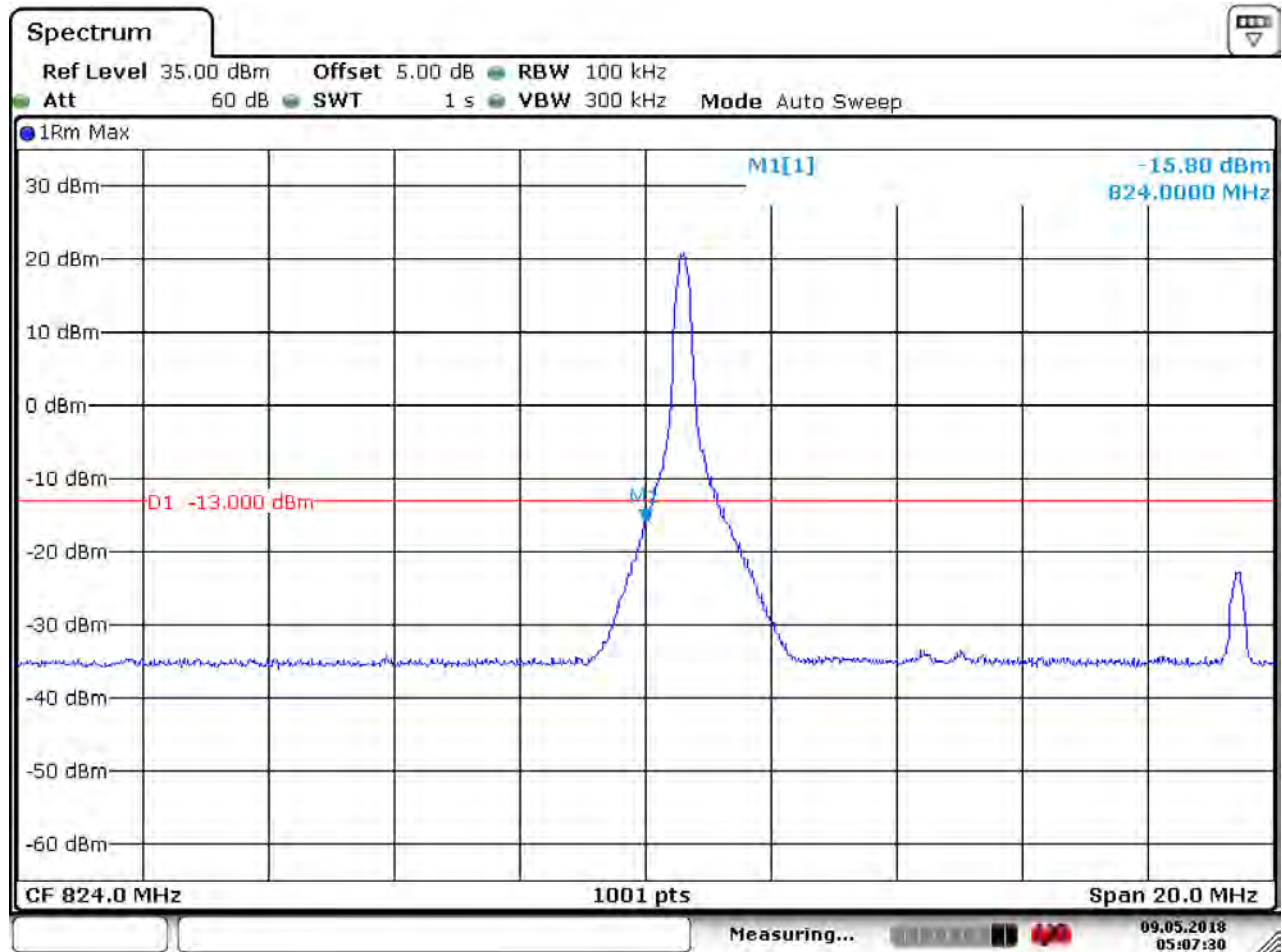
Date: 9.MAY.2018 05:06:17



5.1.1.8 Test Mode = LTE/TM2 10MHz

5.1.1.8.1 Test Channel = LCH

5.1.1.8.1.1 Test RB=1RB

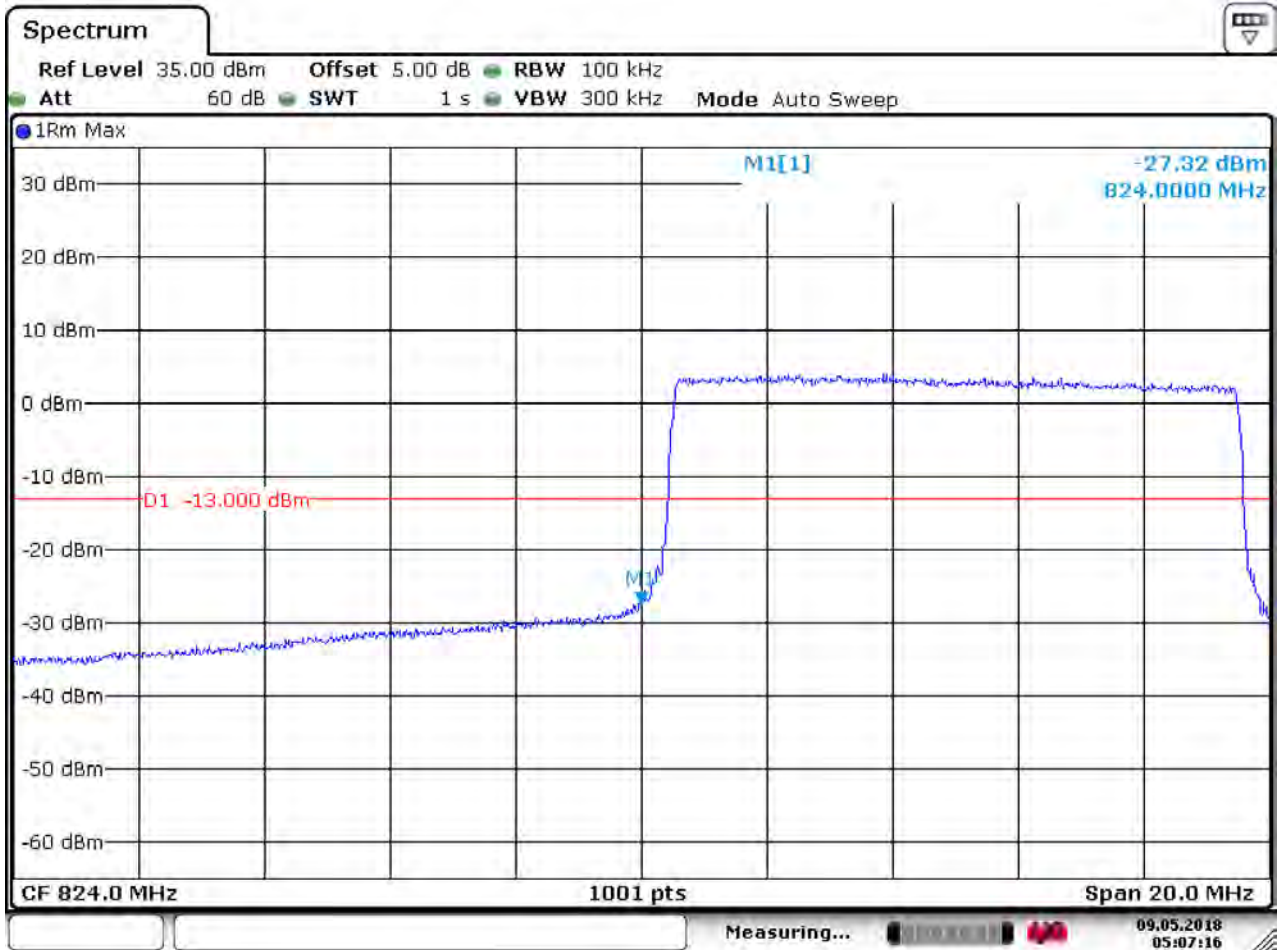


Date: 9.MAY.2018 05:07:30





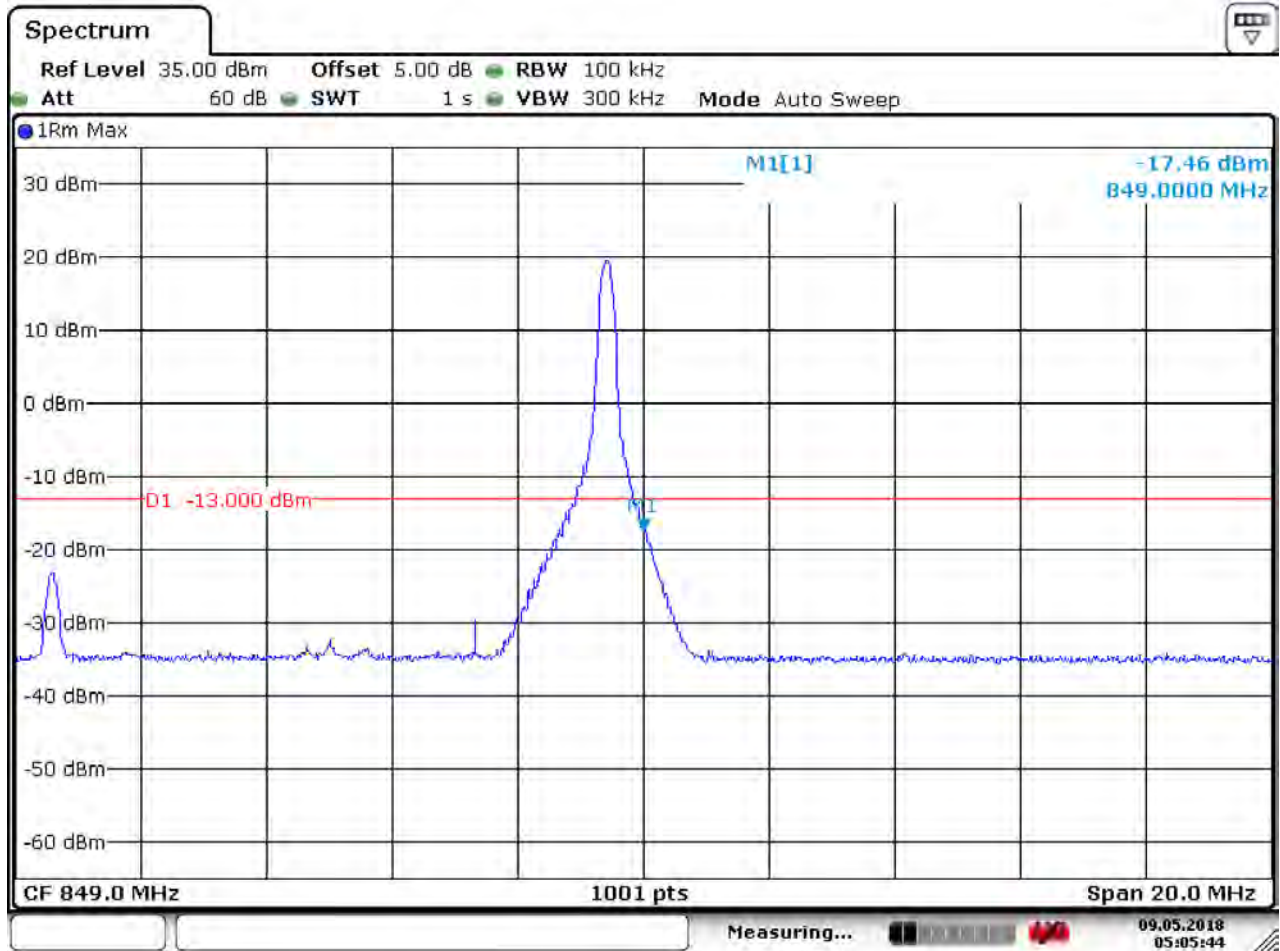
5.1.1.8.1.2 Test RB=50RB



Date: 9.MAY.2018 05:07:16

**5.1.1.8.2 Test Channel = HCH**

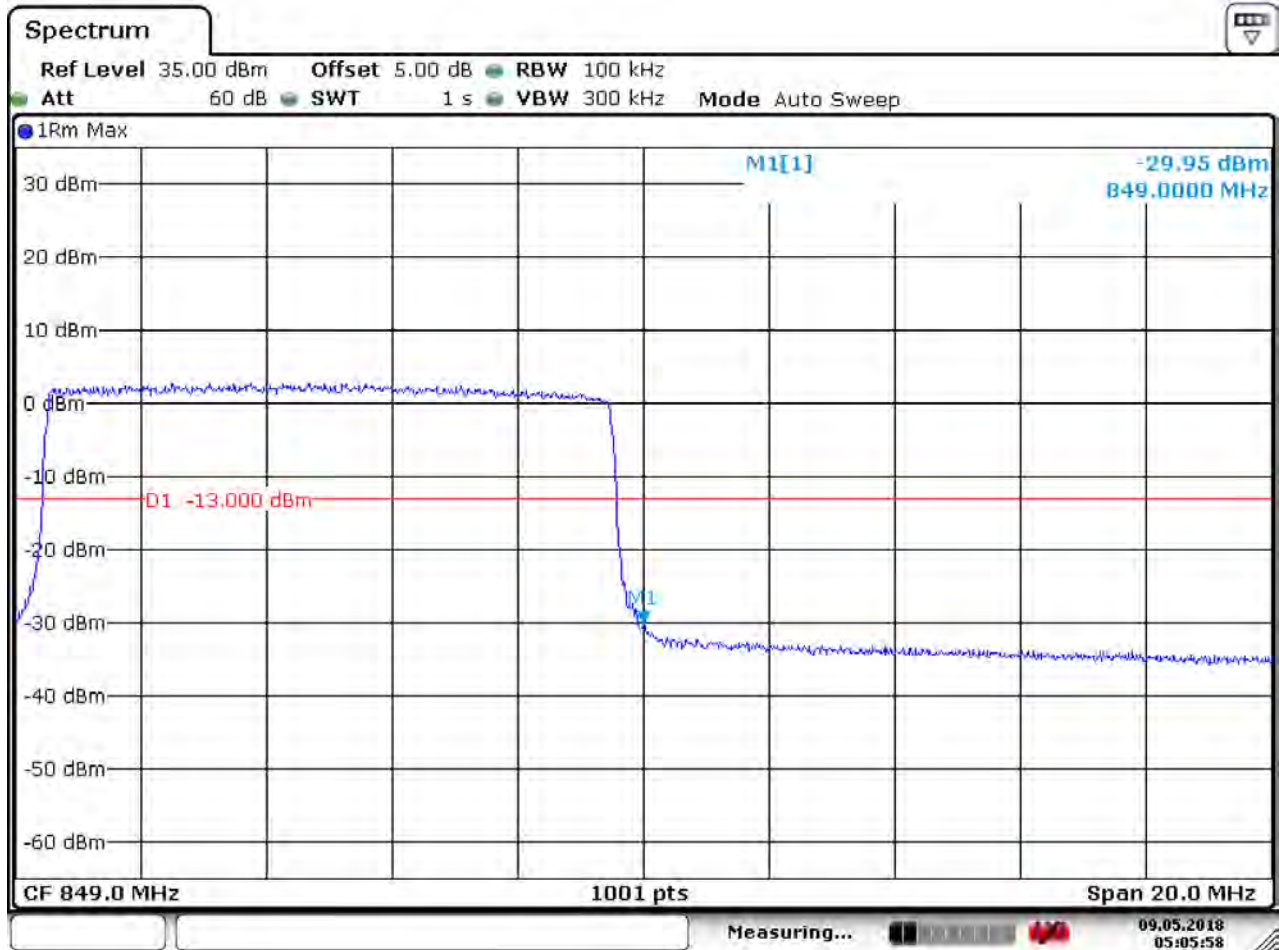
**5.1.1.8.2.1 Test RB=1RB**



Date: 9.MAY.2018 05:05:44



5.1.1.8.2.2 Test RB=50RB



Date: 9.MAY.2018 05:05:58

## 6 Spurious Emission at Antenna Terminal

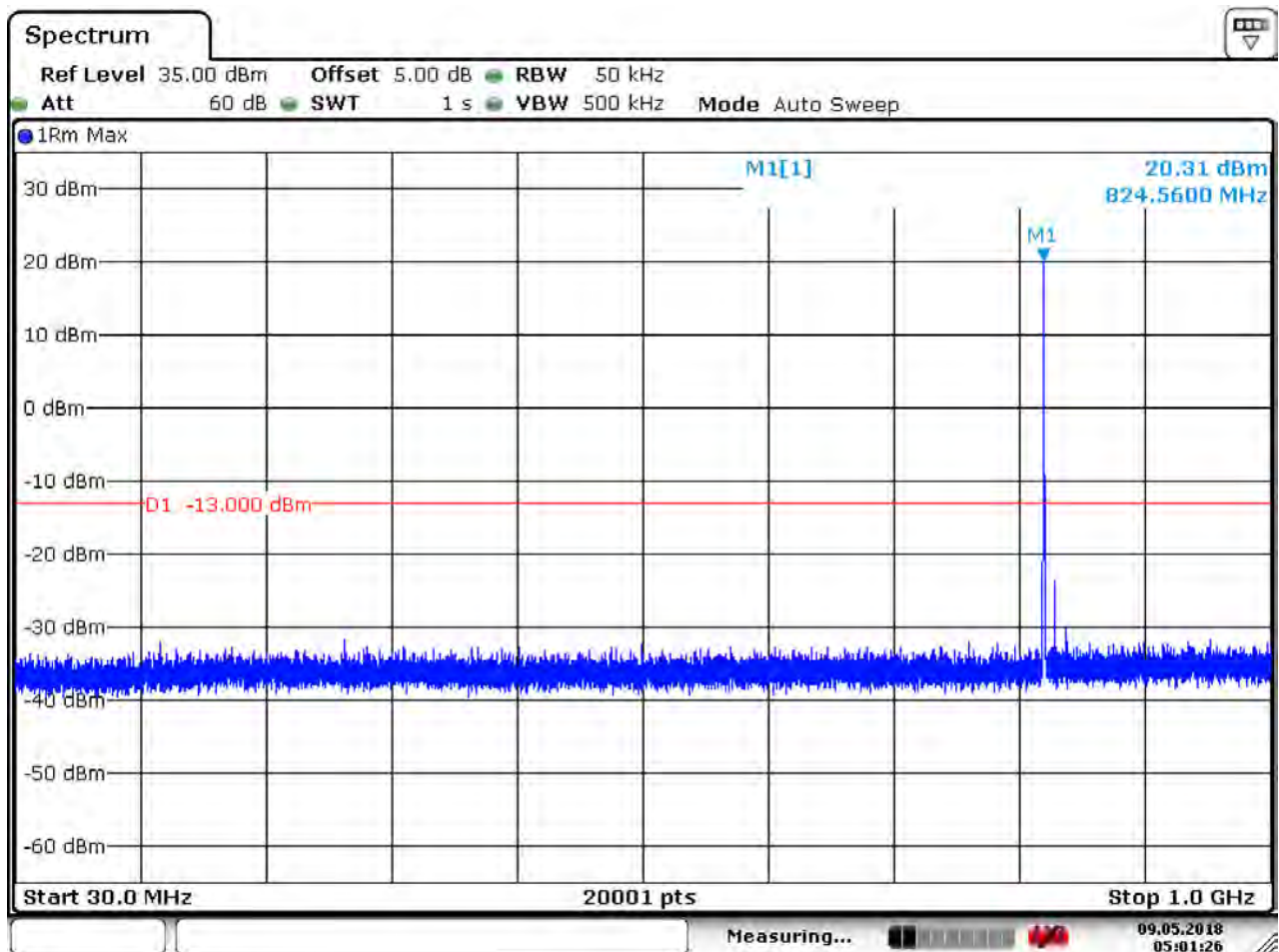
NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Part I - Test Plots

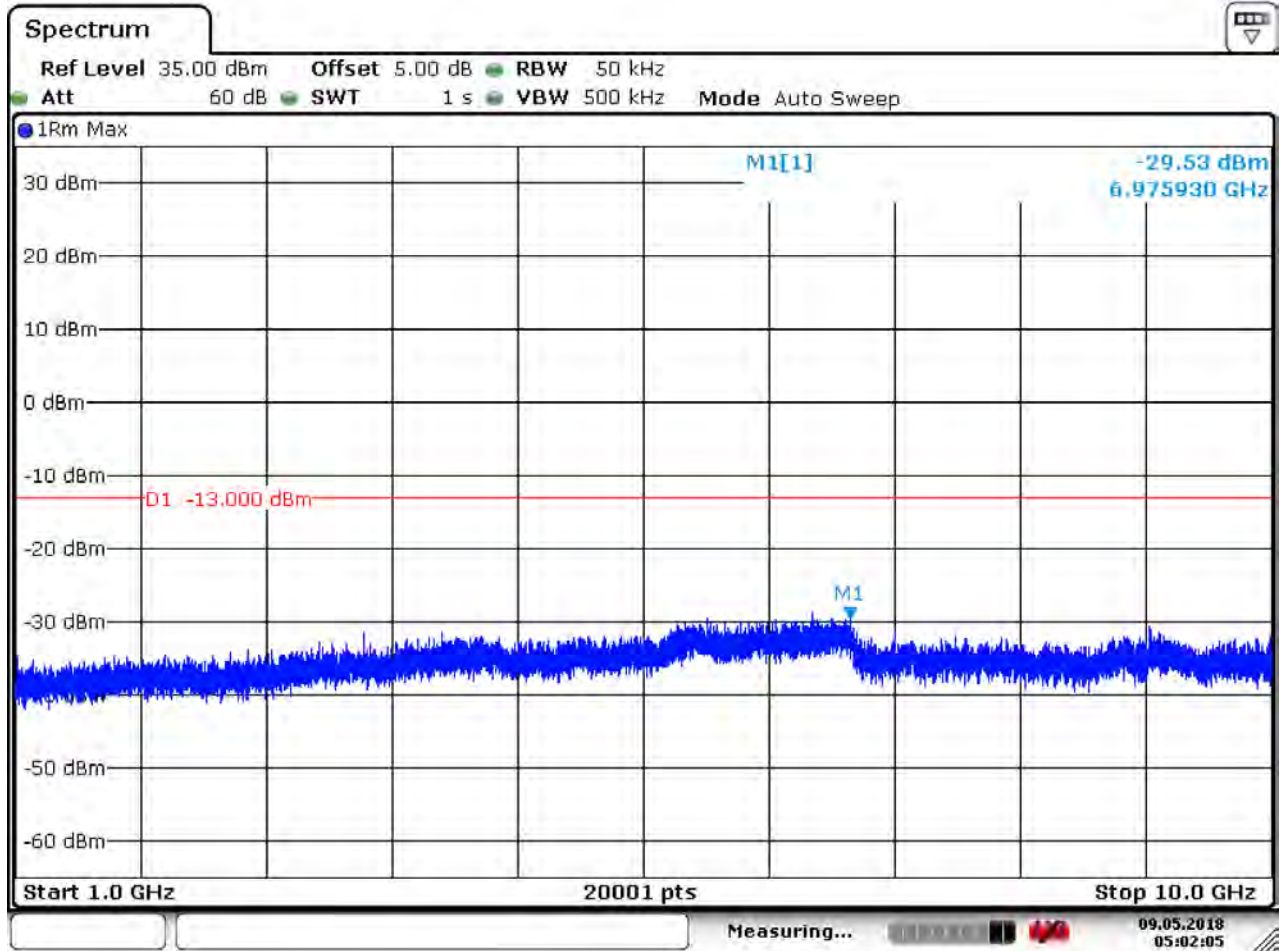
### 6.1 For LTE

#### 6.1.1.1 Test Mode = LTE / TM1 15MHz RB1#0

##### 6.1.1.1.1 Test Channel = LCH



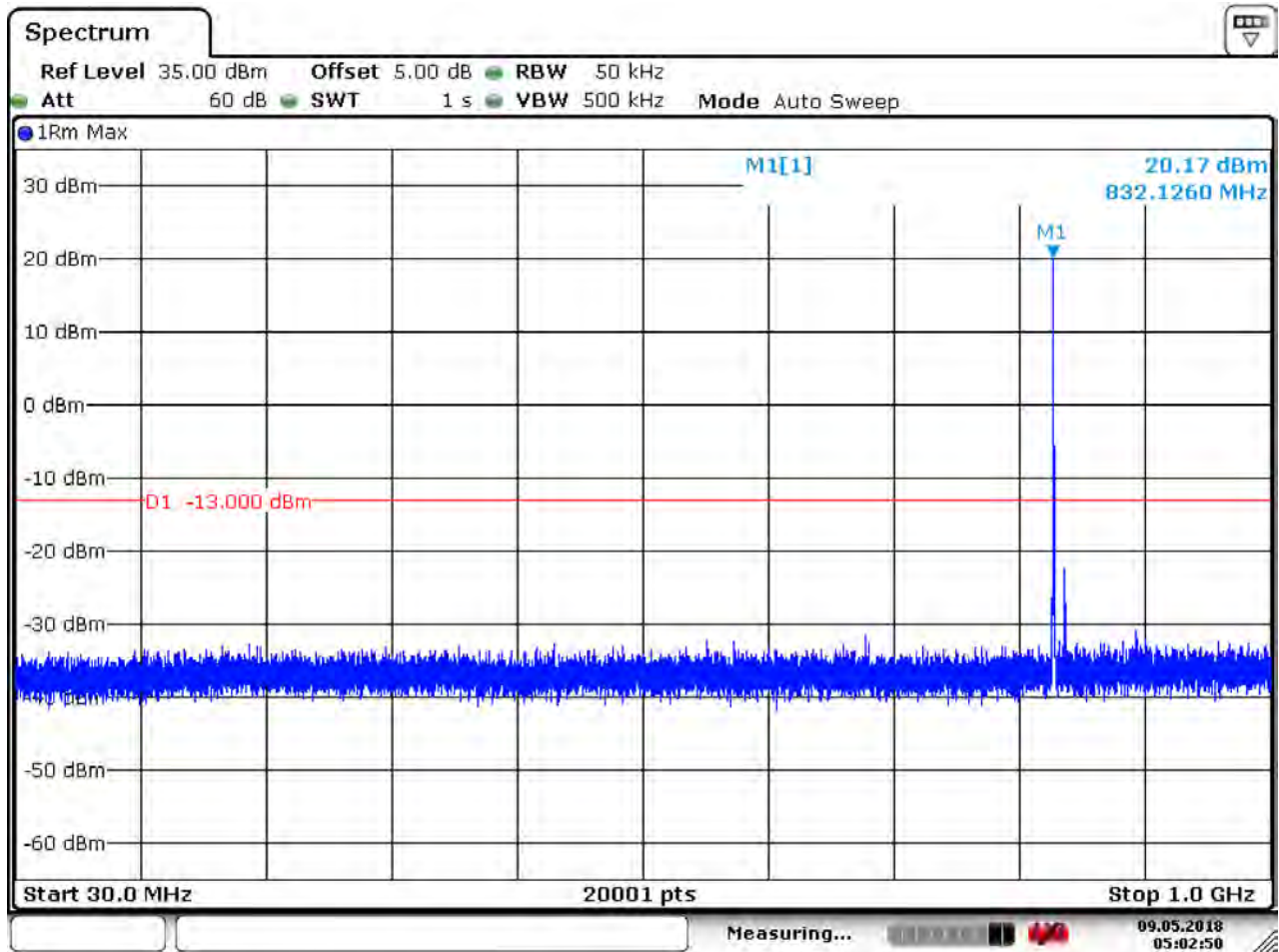
Date: 9.MAY.2018 05:01:27



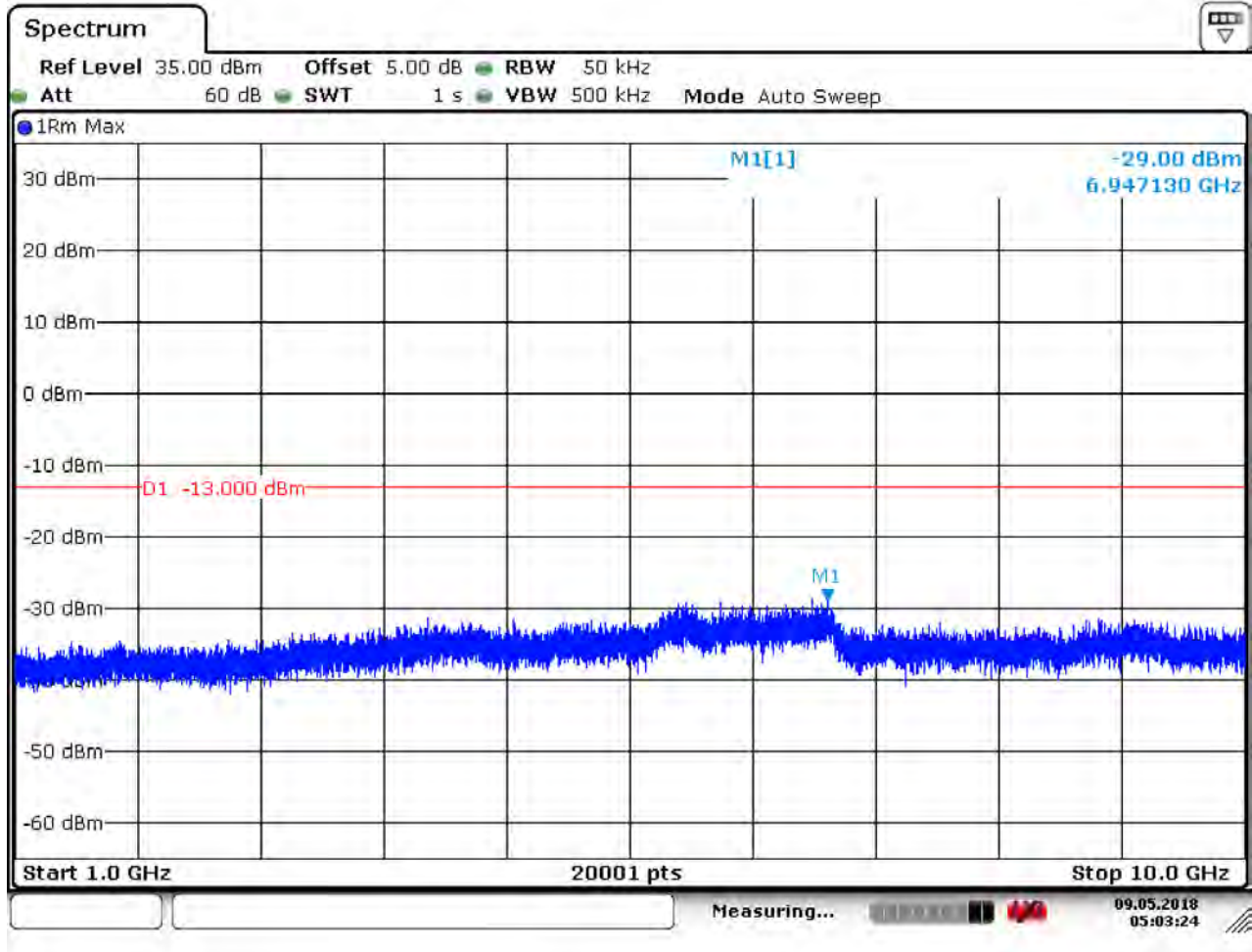
Date: 9.MAY.2018 05:02:05



6.1.1.1.2 Test Channel = MCH



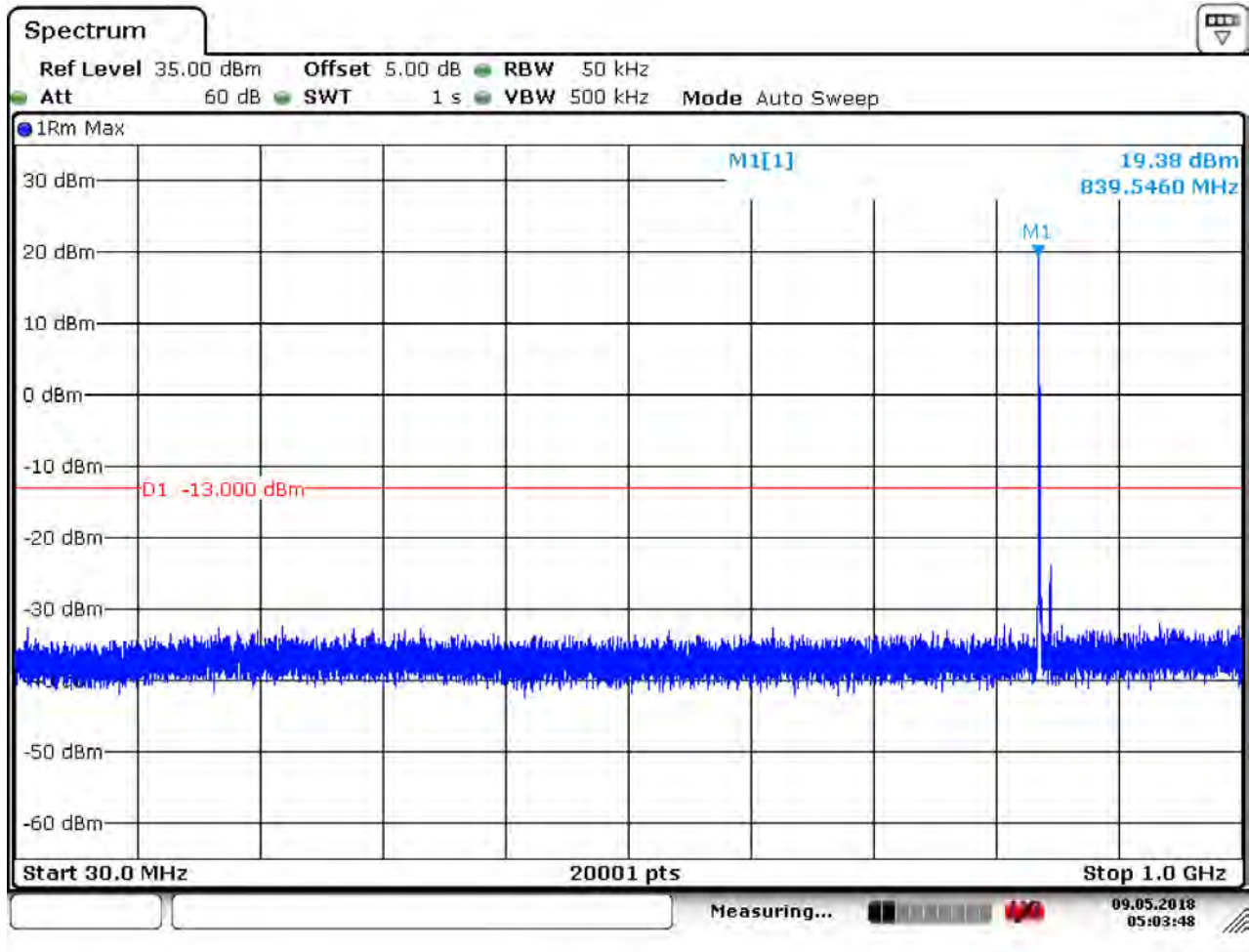
Date: 9.MAY.2018 05:02:51



Date: 9.MAY.2018 05:03:24

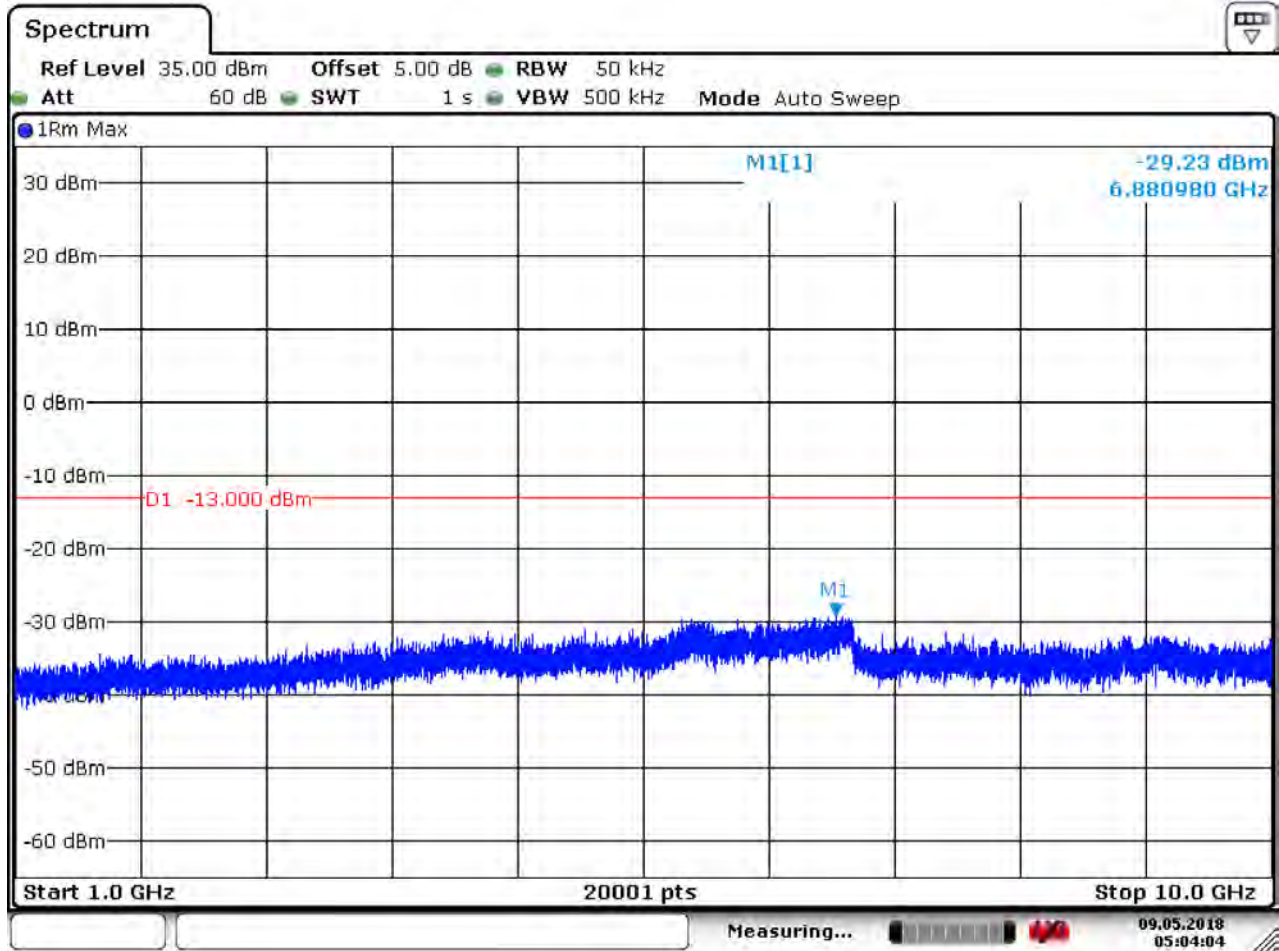


6.1.1.1.3 Test Channel = HCH



Date: 9.MAY.2018 05:03:49





Date: 9.MAY.2018 05:04:05



## 7 Field Strength of Spurious Radiation

### 7.1 For LTE

#### 7.1.1 Test Band = LTE band5

##### 7.1.1.1 Test Mode =LTE/TM1 10MHz RB1#0

###### 7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
64.673333	-81.37	-13.00	68.37	Vertical
109.846667	-79.76	-13.00	66.76	Vertical
3298.350000	-64.51	-13.00	51.51	Vertical
4947.400000	-64.36	-13.00	51.36	Vertical
6826.550000	-65.24	-13.00	52.24	Vertical
9894.875000	-63.98	-13.00	50.98	Vertical
63.133333	-77.69	-13.00	64.69	Horizontal
182.506667	-81.60	-13.00	68.60	Horizontal
3298.025000	-66.11	-13.00	53.11	Horizontal
4947.400000	-63.85	-13.00	50.85	Horizontal
6631.550000	-65.09	-13.00	52.09	Horizontal
9895.200000	-63.48	-13.00	50.48	Horizontal

###### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
65.233333	-81.48	-13.00	68.48	Vertical
110.640000	-80.12	-13.00	67.12	Vertical
299.593333	-87.06	-13.00	74.06	Vertical
1794.000000	-63.66	-13.00	50.66	Vertical
3328.250000	-66.44	-13.00	53.44	Vertical
6692.000000	-65.16	-13.00	52.16	Vertical
62.853333	-77.72	-13.00	64.72	Horizontal
110.033333	-85.06	-13.00	72.06	Horizontal
183.673333	-81.71	-13.00	68.71	Horizontal
3328.250000	-66.90	-13.00	53.90	Horizontal
4992.250000	-66.42	-13.00	53.42	Horizontal
6692.000000	-64.65	-13.00	51.65	Horizontal



**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
63.740000	-81.15	-13.00	68.15	Vertical
111.200000	-79.44	-13.00	66.44	Vertical
3358.150000	-66.82	-13.00	53.82	Vertical
4197.950000	-66.58	-13.00	53.58	Vertical
5037.425000	-64.97	-13.00	51.97	Vertical
9235.450000	-62.50	-13.00	49.50	Vertical
62.153333	-77.55	-13.00	64.55	Horizontal
183.440000	-82.03	-13.00	69.03	Horizontal
3358.150000	-67.15	-13.00	54.15	Horizontal
5037.425000	-63.24	-13.00	50.24	Horizontal
6751.800000	-65.10	-13.00	52.10	Horizontal
10075.250000	-63.70	-13.00	50.70	Horizontal

**NOTE:**

- 1) All modes are tested, but the data presented above is the worst case. The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



## 8 Frequency Stability

### 8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band5	LTE/TM1 10MHz	LCH	TN	VL	7.46	0.00900	PASS
				VN	2.56	0.00309	PASS
				VH	4.83	0.00583	PASS
		MCH	TN	VL	-0.83	-0.00099	PASS
				VN	3.23	0.00386	PASS
				VH	9.41	0.01125	PASS
		HCH	TN	VL	-8.33	-0.00987	PASS
				VN	3.75	0.00445	PASS
				VH	5.36	0.00635	PASS
	LTE/TM2 10MHz	LCH	TN	VL	-2.01	-0.00242	PASS
				VN	-2.33	-0.00281	PASS
				VH	-5.31	-0.00640	PASS
		MCH	TN	VL	8.92	0.01067	PASS
				VN	-6.84	-0.00817	PASS
				VH	-0.10	-0.00012	PASS
		HCH	TN	VL	-8.70	-0.01031	PASS
				VN	-6.20	-0.00735	PASS
				VH	5.84	0.00693	PASS



**8.2 Frequency Error VS. Temperature**

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band5	LTE/TM1 10MHz	LCH	VN	-30	4.25	0.00513	PASS
				-20	-1.32	-0.00159	PASS
				-10	-9.55	-0.01152	PASS
				0	-6.01	-0.00725	PASS
				10	-5.29	-0.00638	PASS
				20	8.27	0.00997	PASS
				30	3.53	0.00425	PASS
				40	-4.59	-0.00553	PASS
				50	1.61	0.00195	PASS
		MCH	VN	-30	0.19	0.00023	PASS
				-20	-9.06	-0.01083	PASS
				-10	2.05	0.00245	PASS
				0	8.33	0.00996	PASS
				10	5.51	0.00658	PASS
				20	0.93	0.00112	PASS
				30	0.10	0.00012	PASS
				40	3.45	0.00412	PASS
				50	0.94	0.00112	PASS
		HCH	VN	-30	0.04	0.00005	PASS
				-20	-7.58	-0.00898	PASS
				-10	-3.36	-0.00398	PASS
				0	7.59	0.00899	PASS
				10	-2.07	-0.00246	PASS
				20	6.77	0.00802	PASS
30	-1.70			-0.00201	PASS		
40	2.58			0.00306	PASS		
50	6.91			0.00819	PASS		



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
LTE band5	LTE/TM2 10MHz	LCH	VN	-30	-9.65	-0.01164	PASS
				-20	5.44	0.00656	PASS
				-10	-3.95	-0.00476	PASS
				0	-8.77	-0.01058	PASS
				10	-0.66	-0.00079	PASS
				20	-9.83	-0.01185	PASS
				30	-6.49	-0.00782	PASS
				40	-4.06	-0.00490	PASS
		MCH	VN	50	8.83	0.01065	PASS
				-30	-0.63	-0.00075	PASS
				-20	-9.18	-0.01097	PASS
				-10	-6.16	-0.00737	PASS
				0	7.77	0.00929	PASS
				10	4.72	0.00565	PASS
				20	-8.77	-0.01049	PASS
				30	-9.32	-0.01114	PASS
		HCH	VN	40	-7.09	-0.00847	PASS
				50	3.41	0.00407	PASS
				-30	7.60	0.00901	PASS
				-20	1.67	0.00198	PASS
				-10	1.72	0.00204	PASS
				0	6.42	0.00760	PASS
				10	-3.85	-0.00456	PASS
				20	1.96	0.00232	PASS
30	-8.76	-0.01038	PASS				
40	4.76	0.00563	PASS				
50	7.07	0.00838	PASS				

The End